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Addendum to Site Characterization Report

East Hampton Airport
Wainscott, Suffolk County, New York

New York State Department of Environmental Conservation
Division of Environmental Remediation
NYSDEC Site No. 152250

January 22, 2020

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position

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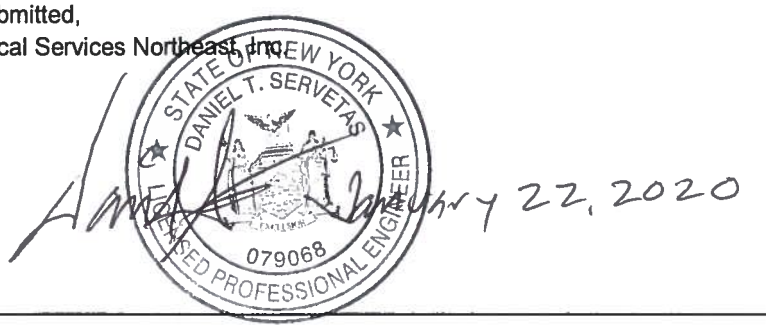
List of Acronyms and Abbreviations

AFFF	aqueous film-forming foam
AGS	Advanced Geological Services
AOC	Area of Concern
ARFF	Aircraft Rescue and Firefighting
bgs	below ground surface
COC	chain of custody
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
EDD	Electronic Data Deliverable
EDS	Environmental Data Services, Inc.
EP&S	Environmental Products & Services of Vermont
FOSA	Perfluorooctane sulfonamide
ft.	foot/feet
GPR	ground penetrating radar
HAL	US EPA Health Advisory Level
I.D.	inside diameter
IDW	investigation-derived waste
MCL	maximum contaminant level
MS/MSD	matrix spike/matrix spike duplicate
MW	monitoring well
ng/g	nanograms per gram
ng/L	nanograms per liter (parts per trillion)
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PFAS	per- and polyfluoroalkyl substances
PFC	perfluorinated compound
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonic acid
PID	photoionization detector
ppt	parts per trillion
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
SC	site characterization
SCDHS	Suffolk County Department of Health Services
SCR	Site Characterization Report
SOW	scope of work
US EPA	United States Environmental Protection Agency

Site Characterization Report Certification

I, Daniel Servetas, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Site Characterization Report Addendum was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Respectfully submitted,
AECOM Technical Services Northeast, Inc.



January 22, 2020

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1. Introduction

This Addendum to the November 2018 Site Characterization Report (SCR) documents the findings of supplemental activities performed following the 2018 site characterization (SC) completed by AECOM Technical Services Northeast, Inc. at the East Hampton Airport in Long Island, New York (Site No. 152250) on behalf of the New York State Department of Environmental Conservation (NYSDEC). The purpose of the SC was to identify the presence or absence of per- and polyfluoroalkyl substances (PFAS) contamination so that a determination could be made as to whether the Site poses a significant threat to public health and/or the environment that warrants further investigation or remedial action. As a group, PFAS are chemicals with broad application, primarily in the manufacture of commercial products that resist heat or chemical reactions and repel oil, stains, grease and water. Perfluorooctanoic acid (PFOA) is a specific PFAS compound found in various industrial products (aerospace, automotive, building, and electronics industries) that is commonly used in nonstick cookware, stain-resistant carpeting and fabrics, and paper and cardboard. PFOA was also used in some formulations of aqueous film-forming foam (AFFF), a common and effective firefighting agent. Perfluorooctane sulfonic acid (PFOS) is the primary PFAS compound used in firefighting foam. This SC was undertaken due to the documented presence of AFFF at the East Hampton Airport for firefighting and fire training activities, either currently or historically, and the associated potential for chemical discharge at concentrations that could present a risk for public health or the environment. Initial Site characterization activities were performed between April and September 2018.

1.1 Site Location

The approximately 610-acre Site (Draft Master Plan Report, Savik & Murray, LLP, April 2007) is located at 200 Daniels Hole Road in the hamlet of Wainscott in Suffolk County, New York (**Figure 1**), approximately 3.4 miles west of the Village of East Hampton on the South Fork of Long Island. The Site, owned by the Town of East Hampton, includes the airport and the East Hampton Industrial Park at the southern end of the airport property along Industrial Road. Various commercial/industrial businesses lease the buildings from the town. Coordinates for the approximate center of the Site are 40°57'37.2" N, 72°15'03.7" W. The nearest residential properties are located south of the Site beyond the railroad tracks and there are additional residential parcels to the west on Town Line Road. At the time of the SC field activities, a majority of the nearby residences obtained their potable water from private groundwater wells. The public water supply network is currently being expanded to service these homes.

The Atlantic Ocean lies to the south of Wainscott; the Village of Sagaponack is located to the west; and the Village of East Hampton is to the east. Other communities that border Wainscott are East Hampton and Northwest Harbor to the northeast, the village of Sag Harbor to the north, and Noyack and Bridgehampton to the west (north of Sagaponack).

The airport property is zoned commercial/industrial according to the town zoning map. Surrounding properties are used for residential and commercial purposes with areas of open, unoccupied land.

1.2 Site Background

Originally built in the late 1930s, the airport is capable of handling small general aviation aircraft. The Site property consists of a public use airport with a parking lot, airport terminal and various support buildings. Additionally, several parcels to the south of the airfield are leased for commercial/industrial and public service tenants. The public service tenants include the East Hampton Fire District Training Facility, the Aircraft Rescue and Firefighting (ARFF) facility, and the East Hampton Police Department.

In the fall of 2017, the Suffolk County Water Authority initiated a drinking water investigation for PFAS, which included sampling private water supply wells and the installation of monitoring wells. Several residences in East Hampton had detectable levels of PFAS contaminants in their well water, with the highest concentrations exhibited at houses situated in close proximity (south/southwest) to the airport property. The Site had not previously been investigated for the presence of PFAS at that time.

1.3 2018 Site Characterization Report Findings

The November 2018 Site Characterization Report provided the following conclusions with regard to SC activities completed at that time:

- Drinking Water: Samples were collected from several private water supply wells that service leased hangar spaces. Samples were collected from sink taps located within each space. Trace to low levels of PFOS and PFOA were detected in each of the tap samples, with PFOS concentrations ranging from 1.2 to 8.9 nanograms per liter (ng/L) and PFOA reported at 1.4 to 22 ng/L. No detections were reported above the 70 ng/L United States Environmental Protection Agency (US EPA) lifetime Health Advisory Level (HAL).
- Soil: The presence of PFAS compounds in soil above laboratory reporting limits indicate that release(s) have occurred on-site. To date no regulatory guidelines have been established to determine soil cleanup objectives or protection of groundwater standards for PFAS in soil. The highest reported concentration of PFAS compounds were from boring EH-19B1, with 12 nanograms per gram (ng/g) of PFOS and 3.8 ng/g of PFOA.
- Groundwater: Investigation findings show that the historic use and/or storage of AFFF have impacted Site groundwater quality. In particular, PFOS and PFOA have been identified in site groundwater at concentrations above the US EPA HAL of 70 ng/L. Analytical results from upgradient and downgradient wells indicate that there are four distinct areas of concern (AOCs), including:
  - **AOC-1**: Groundwater beneath Areas B and E located north of the airfield, where firefighting foam was historically used for crash response and training. PFOS (270 ng/L) and PFOA (17 ng/L) are present in temporary well EH-B1.
  - **AOC-2**: Groundwater beneath Area 16, where AFFF was used during a mass casualty training exercise, is impacted by PFOS above the HAL. PFOS was reported at 290 ng/L in the groundwater sample from downgradient temporary well EH-162, with lower levels of PFOA (9.3 ng/L).
  - **AOC-3**: Groundwater beneath Parcel 19, where the ARFF is located, has been impacted by both PFOS and PFOA above the HAL. Although no documented discharge of AFFF could be confirmed, AFFF is stored in the station. Analytical results for three temporary wells (EH-19A, EH-19A2, and EH-19B) exhibited one or more exceedances of the HAL, with a maximum reported concentration of 174 ng/L for combined PFOS/PFOA.
  - **AOC-4**: Groundwater beneath Parcel 1, occupied by the East Hampton Police Department, has been impacted with PFOA above the HAL. Temporary well EH-1, located adjacent to the burn training structure, exhibited PFOA at 160 ng/L. Groundwater quality in upgradient well EH-19B1 suggests that the contamination originated on the parcel.

1.4 Scope of Work

Based on the 2018 SC findings, AECOM developed a scope of work (SOW) for a supplemental SC including the following tasks:

- Six temporary monitoring well (MW) locations having contained PFOS and/or PFOA concentrations in exceedance of the HAL in 2018 were converted to permanent two-inch wells and developed between December 4 and December 14, 2018.
- Investigation-derived waste (IDW) drum samples were collected for waste characterization purposes, and a tap water sample was collected from the East Hampton Executive Terminal, located to the south of the Airport on Industrial Road. The tap water sample was collected because a tank of potable drilling water had frozen overnight at one point during the permanent well installation activities, and water from the East Hampton Executive Terminal was used instead during one day of work. The tap sample results were used to confirm that the water did not contain PFOS or PFOA.
- On March 4, 2019, AECOM subcontractor C.T. Male Associates (C.T. Male) surveyed the six new permanent wells.

- On March 4 and 5, 2019, AECOM gauged and sampled the permanent MWs using low-flow techniques with perfluorinated compound (PFC)-free pumps/tubing or bailers.
- On March 6, 2019, Environmental Products & Services of Vermont (EP&S) was subcontracted by AECOM to pick up, transport and dispose of all IDW waste drums that had been generated on-site in 2018 and 2019.

1.5 Regulatory Framework

PFAS are not currently regulated at the federal level and are not regulated in soil and groundwater in New York. Effective March 3, 2017, the NYSDEC added PFOA and PFOS to New York State's 6 New York Codes, Rules and Regulations (NYCRR) Part 597 List of Hazardous Substances. While the Final Rule lists PFOS and PFOA as hazardous substances, no screening or clean-up criteria are provided.

The US EPA has established a lifetime HAL of 70 ng/L for PFOS and PFOA, individually or combined, to protect against potential risk from exposure to drinking water contaminated by these compounds. There are no regulatory criteria for the other 19 PFAS compounds analyzed for at this time; therefore, discussion focuses primarily on PFOA and PFOS. In December 2018, the New York State Drinking Water Quality Council recommended that the New York State Department of Health (NYSDOH) adopt low maximum contaminant levels (MCLs) for PFOA and PFOS of 10 parts per trillion (ppt) for each compound.

2. Field Activities

Field activities for the supplemental SC were performed between December 4, 2018 and March 6, 2019 during multiple site mobilizations. This Section provides detail on the investigation tasks completed during that timeframe. The following subcontractors provided services during the supplemental SC:

- Drilling - Aztech Environmental Technologies (Aztech), AECOM Subcontractor
- Surveying **-** C.T. Male, AECOM Subcontractor
- Chemical Laboratory Analyses **-** ALS Environmental, Inc., AECOM subcontractor
- IDW Removal – Environmental Products & Services of Vermont (EP&S), AECOM Subcontractor
- Data Validation – Environmental Data Services, Inc. (EDS), AECOM Subcontractor

All field activities were performed or supervised by an AECOM geologist. Photographs of field activities are included in **Appendix A** and daily reports are provided in **Appendix B**.

2.1 Mobilization/Utility Clearance

During the investigation, extensive precautions were used to eliminate the potential for cross-contamination from PFAS-containing materials. This preparation included ensuring field staff used PFC-free clothing, equipment, and supplies during supplemental SC activities and using certified PFC-free water during drilling and sampling (supplied by Aztech and the East Hampton Executive Terminal).

Prior to commencing any intrusive activities, AECOM confirmed clearance of offsets to pre-existing temporary well locations with Advanced Geological Services (AGS). The locations for permanently installed MWs were offset from corresponding temporary MW locations by approximately 1 ft. Additional ground penetrating radar (GPR) mark-outs were not necessary prior to the permanent MW installation, as they were within the radius around the temporary MW locations originally cleared by AGS in August 2018.

2.2 Drilling Program

2.2.1 Soil Sampling

Soil samples were not collected during the process of installing permanent MWs and abandoning the corresponding temporary MWs in December 2018, since soil was collected and analyzed when the temporary MWs were installed in spring 2018.

2.2.2 Permanent MW Installation

Six temporary MWs (EH-1, EH-19A, EH-19B, EH-19A2, EH-B1, and EH-162) were designated to be converted to permanent MWs. These six wells contained the highest concentrations of PFOA and/or PFOS from the 2018 SC sampling event. From December 4 through 13, 2018, Aztech installed the permanent wells with AECOM oversight within ± 1 foot of the corresponding temporary well locations, the names of which were carried over to the permanent wells. A Geoprobe 3230 DT direct push track-mounted unit was used for the permanent well installation activities. After the depth to groundwater was confirmed in each location, a 2-inch inside diameter (I.D.) PVC well was installed with a 10-ft. length section of 0.010-inch slot well screen to facilitate groundwater sampling. Aztech used totes of PFC-free water during drilling activities. The soils comprising the permanent wells were screened with a PID and logged. Each MW was finished with #0 filter sand pack, bentonite and grout and sealed with a 4-inch diameter steel protective casing with locking cap and a flush-mount road box. The six temporary wells were abandoned by filling the 1-inch boreholes with sand to match the existing surface elevation. Drilling equipment was decontaminated between well locations and stakes were placed to mark the locations for future surveying. Following completion of well installation, Aztech developed all six wells by purging each location of ten well volumes. IDW was placed into 55-gallon steel drums stored in temporary secondary containment structures in the northeastern portion of the airport property pending sampling, analysis and disposal (refer to **Figure 2**). Upwind and downwind air monitoring was performed by AECOM field personnel on a regular basis using a photoionization detector (PID). Field observations,

measurements, and well construction timetables were recorded in the Daily Reports as provided in **Appendix B**. Monitoring well construction and development logs are presented in **Appendix C** and surveyed well locations are provided on **Figure 2**.

2.3 Drinking Water Tap Sampling

On December 14, 2018, a tap water sample was collected from inside the East Hampton Executive Terminal building. Water from the tap had to be used for one day during the permanent well drilling process since the tote of water supplied by Aztech had frozen overnight and was unusable at the time. As a result, the tap was tested for the presence of PFAS. The sample location is shown on **Figure 2**. An East Hampton Airport employee escorted AECOM personnel throughout the process. The tap was purged for a brief period to ensure sampled water was newly extracted from the well and not stagnant in the piping. The tap was sampled in accordance with AECOM Standard Operating Procedures for Sampling PFAS. The sample was preserved on ice, packaged, and submitted under standard chain of custody (COC) procedures to ALS Environmental for PFAS analysis. Sample results are discussed in Section 4.1 and laboratory data is provided in **Appendix E**.

2.4 Groundwater Monitoring Program

During groundwater sampling activities in March 2019, water levels in the permanent wells were collected and recorded on monitoring well purging/sampling forms (**Appendix D**) using an electronic water level meter, which was decontaminated before proceeding to the next well location. Measurements were referenced to the top of each PVC well riser.

Groundwater sampling was performed using low-flow sampling techniques, when possible, with a peristaltic pump, high density polyethylene PFC-free tubing, a YSI-556 multi-meter, and a HACH 2100 turbidity meter. When the groundwater level was too low to use a peristaltic pump (i.e., in EH-19A, EH-19A2, and EH-19B), purging and sampling were performed using a PFC-free 2-inch diameter PVC bailer, PFC-free twine, a YSI-556 multi-meter, and a HACH 2100 turbidity meter. AECOM Standard Operating Procedures for Sampling PFAS were followed by all field staff during the supplemental SC activities. The groundwater samples were preserved on ice, packaged, and submitted under standard COC procedures to ALS Environmental and analyzed for the list of 21 PFAS compounds shown in **Table 1**. Purge water was placed into the water drums left on-site during the December 2018 field activities for disposal at the end of the field mobilization. Daily reports describing field activities are provided in **Appendix B**, and groundwater purging/sampling logs are presented in **Appendix D**. Sample results are discussed in Section 4.2 and laboratory data is provided in **Appendix E**.

2.5 Quality Assurance/Quality Control

Field duplicates, matrix spikes/matrix spike duplicates (MS/MSD), equipment blanks, and trip blanks are often collected and analyzed as needed for quality assurance/quality control (QA/QC) purposes. In December 2018, AECOM did not collect any QA/QC samples in conjunction with the IDW and tap water samples. During the permanent well groundwater monitoring event in March 2019, AECOM collected a duplicate sample (DUP) from EH-162, and MS/MSD samples were collected from EH-19B. Additionally, equipment blanks were collected from the 2-inch bailers and twine and field blanks were collected using the PFAS-free water provided by ALS Environmental on each sampling day. All QA/QC samples were stored and shipped with the PFAS groundwater samples.

2.6 Site Survey

On March 4, 2019, C.T. Male completed a survey of all permanent MWs during the groundwater sampling mobilization. Collected data for each location included grade elevation, top of casing, top of PVC, northing, easting, latitude, and longitude. A revised Monitoring Well Locations map which includes the coordinates of the six new permanent wells is provided as **Appendix F**.

2.7 IDW Sampling

IDW drums containing soil cuttings, water from drilling activities, and water from well development and sampling were generated on-site in December 2018 and March 2019. The drums were stored in temporary secondary containment structures consisting of a wooden frame and polyethylene sheeting and covered with polyethylene sheeting. IDW sampling was performed on December 14, 2018 following the installation and development of the permanent MWs.

Three composite IDW samples were collected: two from drums containing soil cuttings and one from a purge water drum. The IDW samples were preserved on ice, packaged, and submitted under standard COC procedures to ALS Environmental and analyzed for the list of 21 PFAS compounds, TCLP volatile organic compounds, TCLP semi-volatile organic compounds, TCLP pesticides, TCLP herbicides, TCLP metals, pH and/or flash point as required for transportation and disposal of the drums. Sample results are discussed in Section 4.3 and laboratory data is provided in **Appendix E**.

3. Physical Setting

3.1 Site Topography and Drainage

Ground elevations on-site range between 30 and 55 feet above Mean Sea Level, based on data collected during the monitoring well survey. Some areas of higher elevation exist to the west and south. The airport property is developed with numerous buildings and includes large expanses of paved (impermeable) surfaces. The remainder of the property is characterized by open fields and wooded areas.

3.2 Site Geology and Hydrogeology

The Site geologic setting consists of a glacial outwash plain that slopes south from the Ronkonkoma Moraine to bays and barrier islands, which form the southern boundary of Long Island. Shallow soils are generally comprised of glacial outwash sands with intermittent non-continuous silt and clay lenses that originated from the receding Wisconsin ice sheets at the end of the Pleistocene epoch.

Groundwater beneath the airport is found within three different aquifers:

1. Lloyd Aquifer: the deepest aquifer, providing a reliable source of drinking water unimpacted by the salt water intrusion that commonly affects shallow aquifers on Long Island;
2. Magothy: a productive source of drinking water; and
3. Upper Glacial: the unconfined, shallow surficial aquifer, which is the major source of potable water around the Site. This unconfined aquifer consists of very porous and highly permeable coarse sand and gravel and can yield large quantities of water.

Depth to groundwater at the Site varies from 15 feet bgs in the northern portion of the Site to 30 feet bgs at the industrial park located along the southern boundary of the airport. Groundwater flows from northwest to southeast across the Site with a gradient of 4.0×10^{-4} ft./ft.

4. Analytical Results

The following sections present the laboratory results for samples collected during the December 2018 and March 2019 SC activities. All samples were analyzed for 21 PFAS compounds via US EPA Method 537 unless otherwise noted.

4.1 East Hampton Executive Terminal Tap Sampling

During the permanent well installation activities, one water tap was sampled inside the East Hampton Executive Terminal. These results are provided in **Table 2**. Although PFOA and PFOS were not detected at elevated concentrations, PFOA was detected at a low concentration of 0.64 J ng/L, while PFOS was not detected. One other PFAS compound, Perfluorooctane sulfonamide (FOSA), was detected in the tap water sample; however, there is not currently a state or federal advisory level for this PFAS for comparison purposes. The laboratory report containing the tap sample results is provided in **Appendix E**.

4.2 Permanent MW Groundwater Sampling

During SC field activities in March 2019, AECOM collected groundwater samples from six permanent monitoring wells (EH-1, EH-19A, EH-19B, EH-19A2, EH-B1, and EH-162). The laboratory data package containing the groundwater sample results was submitted to EDS for data validation. The sample results are presented in **Table 1** and portrayed on **Figure 3**. **Figure 4** displays approximate groundwater elevation contours for the East Hampton Airport site based on permanent well data only. QA/QC sample results are also included in **Table 1**. None of the QA/QC samples contained detectable concentrations of PFAS except the DUP sample, which contained similar concentrations as sample EH-162.

PFOS and/or PFOA were detected in all six of the permanent monitoring wells, with combined concentrations ranging from 6.99 ng/L to 207 ng/L. The HAL of 70 ng/L was exceeded in samples from five of the six permanent monitoring wells. The only well with concentrations below the HAL was EH-1 located on the East Hampton Police Department lease property south of the airport.

As previously stated, there are no current state or federal advisory levels for PFAS compounds other than PFOS and PFOA. Many of the remaining 19 PFAS analytes were identified in at least one groundwater sample at a variety of concentrations. In addition to elevated PFOS/PFOA impacts, samples from wells in Parcel 19 exhibited concentrations of other perfluoroalkyl carboxylic acids that were one to two orders of magnitude higher than wells for other target areas. The laboratory report containing the permanent well groundwater sample results is provided in **Appendix E**.

4.3 IDW Sampling and Disposal

During the field activities in December 2018, AECOM collected one purge water and two soil IDW samples. PFAS were not detected in the soil samples. In the IDW water sample, PFOS was detected at a concentration of 150 ng/L and PFOA was detected at 130 ng/L, exceeding the US EPA lifetime HAL for both compounds. 11 of the 19 other PFAS compounds were also detected in the sample. The PFAS sampling results are provided in **Table 2**. The laboratory reports containing all IDW analytical data are provided in **Appendix E**. On March 6, 2019, EP&S transferred a total of 19 soil drums and three water drums to a box truck using a rented skid steer from Sunbelt Rentals and transported the waste off-site. The drums were disposed at Waste Recovery Solutions in Myerstown, Pennsylvania. A bill of lading for the shipment is provided as **Appendix G**.

4.4 Data Quality

A Data Usability Summary Report (DUSR) was prepared by EDS for the permanent well groundwater sampling data; this process included a review of the full Category B analytical packages. Data qualifiers were modified on the laboratory data sheets provided in the DUSR and in the electronic data deliverables (EDDs), as appropriate, and final values are presented in the tables, figures and appendices attached to this report. All data was deemed usable by the data validator. The DUSR is provided in **Appendix E**.

4.5 Electronic Data Deliverables

All laboratory data was received in a format compatible for submission to NYSDEC's centralized database. A separate electronic data deliverable submission will be made to the NYSDEC for the permanent well groundwater results, which will include validated analytical data and well survey coordinates.

5. Conclusions and Recommendations

The following conclusions and recommendations can be made based on the SC findings for the East Hampton Airport PFAS assessment. As additional information for this site becomes available, it will be reviewed by NYSDEC and NYSDOH officials and incorporated into the site conceptual model to determine whether site contamination presents public health exposure concerns.

5.1 Conclusions

- Drinking Water: Samples were collected from the tap located within the East Hampton Executive Terminal. Trace amounts of PFOA were detected in the tap sample, with a concentration of 0.64 ng/L; however, this was well below other tap sample results collected during the initial SC.
- Groundwater: Investigation findings show that the historic use and/or storage of AFFF have impacted Site groundwater quality. In particular, PFOS and PFOA have been identified in Site groundwater at concentrations above the US EPA HAL of 70 ng/L in five of the six permanent monitoring wells installed as part of the supplemental SC. Consistent with the findings of the November 2018 SC Report, analytical results from upgradient and downgradient wells indicate that there are four distinct areas of concern including:
  - **AOC-1**: Groundwater beneath Area B located north of the airfield, where firefighting foam was historically used for crash response and training. PFOS (110 ng/L) and PFOA (25 ng/L) are present in permanent well EH-B1. These levels are relatively similar to the previous sampling event.
  - **AOC-2**: Groundwater beneath Area 16, where AFFF was deployed during a mass casualty training exercise, is impacted by PFOS above the HAL. PFOS was reported at 130 ng/L in the groundwater sample from downgradient permanent well EH-162, with lower levels of PFOA (9.5 ng/L). Previously recorded levels were relatively similar (PFOA = 9.3 ng/L and PFOS = 290 ng/L).
  - **AOC-3**: Groundwater beneath Parcel 19, where the ARFF station is located, has been impacted by both PFOS and PFOA above the HAL. Although no documented discharge of AFFF could be confirmed, AFFF is stored in the station. Analytical results for three permanent wells in this area (EH-19A, EH-19A2, and EH-19B) exhibited exceedances of the HAL for PFOA and/or PFOS, with a maximum reported concentration of 207 ng/L for combined PFOS/PFOA. The level recorded in March 2019 was greater than the previously reported maximum concentration in Parcel 19 (174 ng/L).
  - **AOC-4**: Groundwater beneath Parcel 1, occupied by the East Hampton Police Department, has been impacted with low levels of PFOA/PFOS. Permanent monitoring well EH-1, located adjacent to the burn training structure, contained PFOA at a concentration of 6 ng/L and PFOS at a concentration of 0.99 J ng/L. This is significantly lower than the previously reported levels of 160 ng/L and 1.8 J ng/L, respectively, from the temporary well sampled during the initial SC. Additional monitoring is required to determine if there is a seasonal or other variable that may be the cause of the differing results.

5.2 Recommendations

The NYSDEC combined the multiple AOCs into one site listing. The NYSDEC reclassified the three individual parcels back into one site as a Class 2 Inactive Hazardous Waste Site. Based on the reclassification and guidance from the NYSDEC AECOM can offer further recommendations regarding how to precede.

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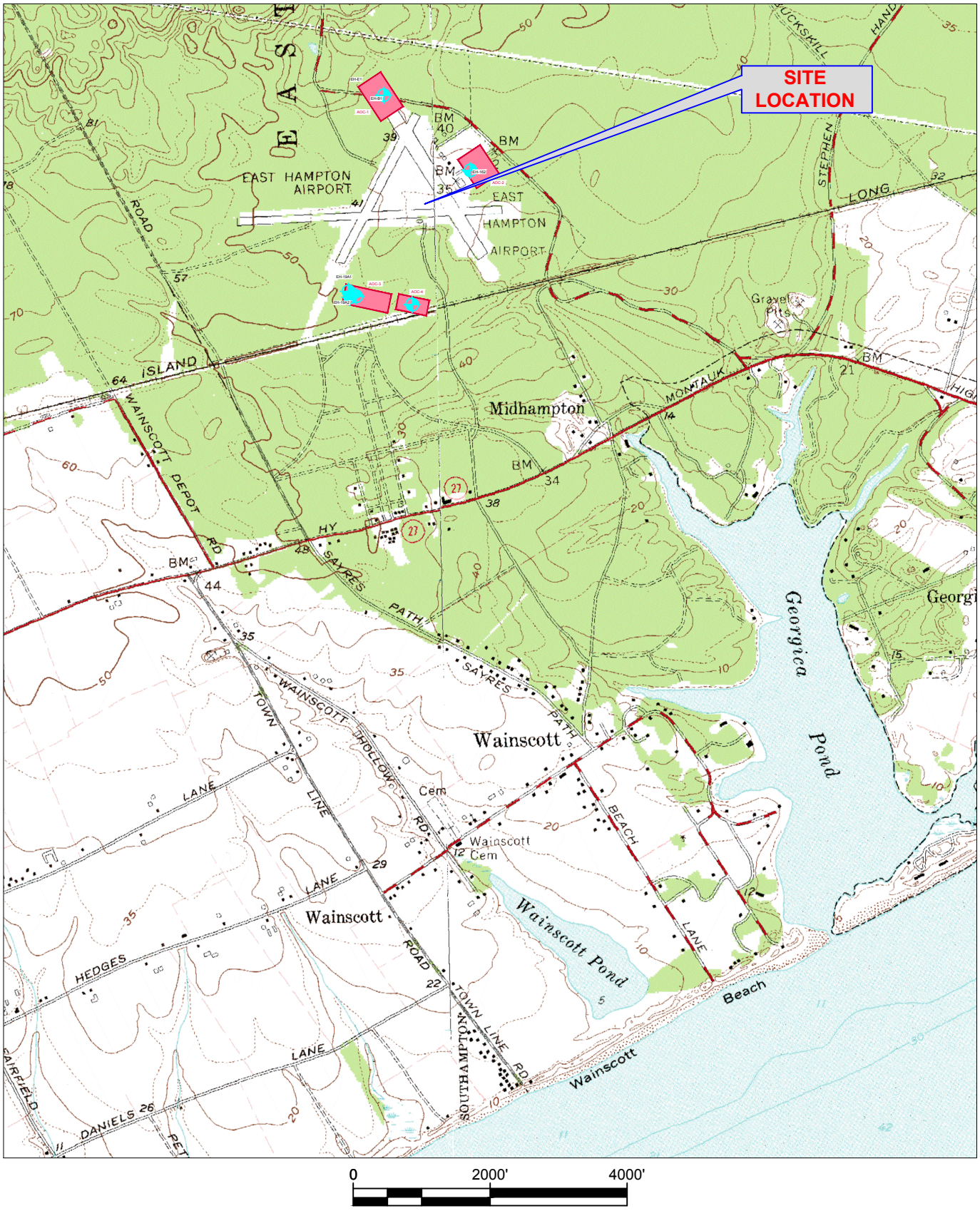

EAST HAMPTON AIRPORT
SITE CHARACTERIZATION REPORT ADDENDUM
New York State Department of Environmental Conservation
Wainscott, Suffolk County, New York
Project No.: 60566160 Date: July 2019

SITE LOCATION PLAN

AECOM

Figure: 1

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LEGEND

- PERMANENT WELL
- MONITORING WELL / PIEZOMETER
- SOIL BORING
- CATCH BASIN
- TAP LOCATION

EH-E1
EH-E
EH-B
EH-B1
IDW STORAGE AREA
EH-SAS
SAS-1
SAS-2
SAS-3
HH-11
HH-18
HH-7/8
HH-20/21
EH-161
EH-16
EH-162
EH-C
EH-A1
EH-A2
EH-A3
EH-A
CATCH BASIN
EH-P2
EH-P1
EH-P3
EAST HAMPTON
EXECUTIVE TERMINAL
EH-19A1
EH-19A
EH-19B
EH-19A2
EH-19B1
EH-1
EH-10
EH-18
EH-1
EH-18
MW-10
(SUFFOLK COUNTY WELL)

0 400' 800'

PLAN

AECOM
Figure: 2
EXISTING SITE FEATURES

EAST HAMPTON AIRPORT
SITE CHARACTERIZATION REPORT ADDENDUM
New York State Department of Environmental Conservation
Wainscott, Suffolk County, New York
Project No.: 60566160 Date: July 2019

Last saved by: CARRIE.SZCZEPANSKI(2019-07-09) Last Plotted: 2019-07-10
Filename: P:\60566160 EAST HAMPTON AP NY\SDE\900-CAD-GIS\10 CAD_BIM\20-SHEETS\CDRAFT-REPORT\DRAFT-GW-REPORT-JULY 2019.DWG
Project Management Initials: Designer: KAM Checked:____ Approved:____ ANSI B 11" x 17"

LEGEND

- PERMANENT WELL
- MONITORING WELL / PIEZOMETER
- SOIL BORING
- CATCH BASIN
- TAP LOCATION

Notes:

J - the analyte is an estimated quantity.

U - the analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Bold values indicate the analyte was detected in the laboratory sample.

Shading indicates the value exceeds the US EPA Health Advisory Level of 70 ng/L for PFOA or PFOS, individually or combined.

US EPA - United States Environmental Protection Agency

Concentration units in the data boxes are nanograms per liter (ng/L).

EH-E1
EH-E
EH-B
EH-B1
EH-SAS
SAS-1
SAS-2
SAS-3
HH-11
HH-18
HH-7/8
HH-20/21
EH-161
EH-16
EH-162
EH-C
EH-A1
EH-A2
EH-A3
EH-A
CATCH BASIN
EH-P3
EH-P2
EH-P1
EH-19A1
EH-18
EH-1
EH-19A
EH-19A2
EH-19B
EH-19B1
EH-10
MW-10
(SUFFOLK COUNTY WELL)

EH-E

Analytes	Concentration (ng/L) 5/7/2018
Perfluorooctane sulfonic acid (PFOS)	**16**
Perfluorooctanoic acid (PFOA)	**1.7**

EH-B

Analytes	Concentration (ng/L) 5/7/2018
Perfluorooctane sulfonic acid (PFOS)	**1.1 J**
Perfluorooctanoic acid (PFOA)	**.81 J**

EH-E1

Analytes	Concentration (ng/L) 8/10/2018
Perfluorooctane sulfonic acid (PFOS)	**1.1 J**
Perfluorooctanoic acid (PFOA)	.48 U

EH-161

Analytes	Concentration (ng/L) 8/9/2018
Perfluorooctane sulfonic acid (PFOS)	**1.4 J**
Perfluorooctanoic acid (PFOA)	**1.2 J**

EH-16

Analytes	Concentration (ng/L) 5/7/2018
Perfluorooctane sulfonic acid (PFOS)	**40**
Perfluorooctanoic acid (PFOA)	**1.7 J**

EH-C

Analytes	Concentration (ng/L) 5/7/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 U
Perfluorooctanoic acid (PFOA)	.46 U

EH-B1

Analytes	Concentration (ng/L) 8/9/2018	3/4/2019
Perfluorooctane sulfonic acid (PFOS)	**270**	**110**
Perfluorooctanoic acid (PFOA)	**17**	**25**

EH-SAS

Analytes	Concentration (ng/L) 8/10/2018
Perfluorooctane sulfonic acid (PFOS)	**3.7**
Perfluorooctanoic acid (PFOA)	2.6 U

EH-162

Analytes	Concentration (ng/L) 8/10/2018	3/4/2019
Perfluorooctane sulfonic acid (PFOS)	**290**	**130**
Perfluorooctanoic acid (PFOA)	**9.3**	**9.5**

EH-P3

Analytes	Concentration (ng/L) 5/8/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 U
Perfluorooctanoic acid (PFOA)	.46 U

EH-P2

Analytes	Concentration (ng/L) 5/8/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 U
Perfluorooctanoic acid (PFOA)	.46 U

EH-A

Analytes	Concentration (ng/L) 5/8/2018
Perfluorooctane sulfonic acid (PFOS)	**1.0 J**
Perfluorooctanoic acid (PFOA)	.46 U

CATCH BASIN

Analytes	Concentration (ng/L) 5/9/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 U
Perfluorooctanoic acid (PFOA)	.46 U

EH-P1

Analytes	Concentration (ng/L) 5/8/2018	Concentration (ng/L) 8/10/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 UJ	1.0 U
Perfluorooctanoic acid (PFOA)	**7.4 J**	.46 U

EH-19A1

Analytes	Concentration (ng/L) 8/10/2018
Perfluorooctane sulfonic acid (PFOS)	**1.4 J**
Perfluorooctanoic acid (PFOA)	**1.2 J**

EH-19A

Analytes	Concentration (ng/L) 5/8/2018	3/5/2019
Perfluorooctane sulfonic acid (PFOS)	**5.0**	**2.4**
Perfluorooctanoic acid (PFOA)	**140**	**170**

EH-19B

Analytes	Concentration (ng/L) 5/8/2018	3/5/2019
Perfluorooctane sulfonic acid (PFOS)	**77**	**87 J**
Perfluorooctanoic acid (PFOA)	**89**	**120**

MW-10

Analytes	Concentration (ng/L) 5/8/2018
Perfluorooctane sulfonic acid (PFOS)	**1.4 J**
Perfluorooctanoic acid (PFOA)	.46 U

EH-18

Analytes	Concentration (ng/L) 5/9/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 U
Perfluorooctanoic acid (PFOA)	.46 U

EH-19A2

Analytes	Concentration (ng/L) 8/10/2018	3/5/2019
Perfluorooctane sulfonic acid (PFOS)	**140**	**150**
Perfluorooctanoic acid (PFOA)	**34**	**15**

EH-1

Analytes	Concentration (ng/L) 5/8/2018	3/4/2019
Perfluorooctane sulfonic acid (PFOS)	**1.8 J**	**.99 J**
Perfluorooctanoic acid (PFOA)	**160**	**6.0**

EH-10

Analytes	Concentration (ng/L) 5/8/2018
Perfluorooctane sulfonic acid (PFOS)	1.0 U
Perfluorooctanoic acid (PFOA)	.46 U

EH-19B1

Analytes	Concentration (ng/L) 8/10/2018
Perfluorooctane sulfonic acid (PFOS)	**9.7**
Perfluorooctanoic acid (PFOA)	**2.1**

PLAN

800' 400' 0

AECOM

Figure: 3

GROUNDWATER ANALYTICAL RESULTS - 2018 AND 2019

EAST HAMPTON AIRPORT
SITE CHARACTERIZATION REPORT ADDENDUM
New York State Department of Environmental Conservation
Wainscott, Suffolk County, New York
Project No.: 60566160 Date: July 2019

Last saved by: CARRIE.SZCZEPANSKI(2019-07-10) Last Plotted: 2019-07-11
Filename: P:\60566160 EAST HAMPTON AP NYS\EC\900-CAD-GIS\910 CAD_BIM\20-SHEETS\C\DRAFT-REPORT\DRAFT-GW-REPORT-JULY 2019 NEW4.DWG
Project Management Initials: Designer: KAM Checked:____ Approved:____ ANSI B 11" x 17"

LEGEND

- PERMANENT WELL
- MONITORING WELL / PIEZOMETER
- SOIL BORING
- CATCH BASIN
- TAP LOCATION
- 14.40 — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER ELEVATION CONTOUR (0.5 FT. INTERVAL)

EH-E1
EH-E
EH-B
15.28
EH-B1
15.0
EH-SAS
SAS-1
SAS-2
SAS-3
HH-11
HH-18
HH-7/8
EH-161
HH-20/21
EH-16
EH-C
14.41
EH-162
EH-A1
EH-A2
EH-A3
EH-A
CATCH BASIN
EH-P2
EH-P3
EH-P1
14.5
14.0
EH-19A1
14.47
EH-19A
14.36
EH-19B
14.40
EH-19A2
EH-19B1
13.75
EH-1
EH-10
EH-18
EH-1
EH-18
MW-10
(SUFFOLK COUNTY WELL)

0 400' 800'

PLAN

AECOM

Figure: 4

GROUNDWATER CONTOUR MAP
PERMANENT WELLS
MARCH 2019

EAST HAMPTON AIRPORT
SITE CHARACTERIZATION REPORT ADDENDUM
New York State Department of Environmental Conservation
Wainscott, Suffolk County, New York
Project No.: 60566160 Date: July 2019

TA LES

Table 1
Groundwater Sampling Data
(May 2018 through March 2019)

Analytes	Health Advisory Water Quality Standards[1]	Groundwater Sampling Data													
		Area	North Field					Sound Aircraft Services	Airport Parking Lot				Northwest Woods	Daniels Hole Road	East Hampton PD	
		MW ID	EH-B	EH-B1		EH-E	EH-E1	EH-SAS	EH-16	EH-161	EH-162		EH-C	MW-10*	EH- 1	
		Date	5/7/2018	8/9/2018	3/4/2019	5/7/2018	8/10/2018	8/10/2018	5/7/2018	8/9/2018	8/10/2018	3/4/2019	5/7/2018	5/8/2018	5/8/2018	3/4/2019
Perfluoroalkane Sulfonic Acids																
Perfluorobutane sulfonic acid (PFBS)	NS		**42**	**2.4 J**	**4.1 J**	**4.9**	**9.4**	.90 U	.90 U	.90 U	**4.2 J**	**4.1 J**	.90 U	.90 U	**8.3**	**8.8**
Perfluorohexane sulfonic acid (PFHxS)	NS		**130**	**34**	**57**	**52**	**24**	**1.8 J**	**2.1 J**	**1.3 J**	**68**	**32**	.94 U	.94 U	**730**	**25**
Perfluoroheptane sulfonic acid (PFHpS)	NS		.88 U	**2.8 J**	**5.0**	.88 U	.88 U	.88 U	.88 U	.88 U	**4.4**	**1.8 J**	.88 U	.88 U	**36**	**.72 J**
Perfluorooctane sulfonic acid (PFOS)	70		**1.1 J**	**270**	**110**	**16**	**1.1 J**	**3.7**	**40**	**1.4 J**	**290**	**130**	1.0 U	**1.4 J**	**1.8 J**	**.99 J**
Perfluorodecane sulfonic acid (PFDS)	NS		1.3 U	1.3 U	.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	.30 U	1.3 U	1.3 U	1.3 U	.30 U
Perfluoroalkane Carboxylic Acids																
Perfluorobutanoic acid (PFBA)	NS		**37**	**6.5 J**	**13**	**5.6 J**	2.7 U	2.7 U	**5.4 J**	2.7 U	**4.2 J**	**3.9 J**	2.7 U	2.7 U	**37**	**43**
Perfluoropentanoic acid (PFPeA)	NS		**120**	**5.9**	**20**	**17**	**8.1**	1.1 U	1.1 U	1.1 U	**3.0 J**	**2.9 J**	1.1 U	1.1 U	**76**	**110**
Perfluorohexanoic acid (PFHxA)	NS		**150**	**13**	**32**	**17**	**11**	.92 U	**2.0 J**	.92 U	**8.9**	8.8 U	.92 U	.92 U	**65**	**110**
Perfluoroheptanoic acid (PFHpA)	NS		**8.9**	**2.7 J**	**9.8**	**2.2 J**	1.2 U	1.2 U	**2.1 J**	1.2 U	**3.3 J**	**3.3 J**	**1.3 J**	1.2 U	**40**	**30**
Perfluorooctanoic acid (PFOA)	70		**.81 J**	**17**	**25**	**1.7**	.48 U	2.6 U	**1.7 J**	**1.2 J**	**9.3**	**9.5**	.46 U	.46 U	**160**	**6.0**
Perfluorononanoic acid (PFNA)	NS		.94 U	**1.0 J**	**1.4 J**	1.7 U	.94 U	**1.5 J**	1.5 U	.94 U	.94 U	1.1 U	.99 U	.94 U	1.2 U	1.1 U
Perfluorodecanoic acid (PFDA)	NS		.92 U	.52 U	1.2 U	1.6 U	.52 U	.60 U	1.0 U	**.70 J**	.52 U	1.2 U	1.1 U	.67 U	.82 U	1.2 U
Perfluoroundecanoic acid (PFUnDA)	NS		1.6 U	.31 U	1.5 U	1.1 U	.31 U	.31 U	1.8 U	**1.6 J**	.31 U	1.5 U	1.1 U	1.0 U	1.4 U	1.5 U
Perfluorododecanoic acid (PFDoDA)	NS		.76 U	.46 U	1.3 U	.87 U	.46 U	.46 U	1.4 U	.46 U	.46 U	1.3 U	.78 U	.89 U	1.2 U	1.3 U
Perfluorotridecanoic acid (PFTrDA)	NS		.83 U	.75 U	1.3 U	**.82 J**	.75 U	.75 U	**.94 J**	.75 U	.75 U	1.3 U	**1.2 J**	.75 U	.90 U	1.3 U
Perfluorotetradecanoic acid (PFTeDA)	NS		1.2 U	1.2 U	2.0 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	2.0 U	1.2 U	1.2 U	1.2 U	2.0 U
Perfluoroalkyl Sulfonamides																
Perfluorooctane sulfonamide (FOSA)	NS		.35 U	.35 U	.52 U	.35 U	.35 U	.35 U	.35 U	.35 U	.35 U	.52 U	.35 U	.35 U	.35 U	.52 U
N-Methyl perfluorooctane sulfonamidoacetic acid	NS		4.2 UJ	4.2 UJ	1.4 U	4.2 UJ	4.2 U	4.2 U	4.2 UJ	4.2 UJ	4.2 U	1.4 U	4.2 UJ	4.2 UJ	4.2 UJ	1.4 U
N-Ethyl perfluorooctane sulfonamidoacetic acid	NS		.83 U	.83 U	.50 U	.83 U	.83 U	.83 U	.83 U	.83 U	.83 U	.50 U	8.3 U	.83 U	.83 U	.50 U
(n:2) Fluorotelomer Sulfonic Acids																
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NS		1.2 U	1.2 U	**7.1**	1.2 U	1.2 U	**1.6 J**	1.2 U	1.2 U	1.2 U	**4.5**	1.2 U	1.2 U	**7.0**	**3.0 J**
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NS		.65 U	.65 U	.15 U	.65 U	.65 U	.65 U	.65 U	.65 U	.65 U	.15 U	.65 U	.65 U	.65 U	.15 U

Notes:
NS - No standard exists
Detected concentrations are in bold font.
Detections exceeding the US EPA HAL of 70 ng/L for either PFOA, PFOS or a combination of both are highlighted in gray.
J - The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
U - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Units are in ng/L (nanograms/liter)
* - MW-10 is a Suffolk County well installed during a previous investigation (not installed by AECOM)
1 - United States Environmental Protection Agency (US EPA)-established Drinking Water Health Advisory Level (HAL)

Table 1
Groundwater Sampling Data
(May 2018 through March 2019)

East Hampton Airport
200 Daniels Hole Road
Wainscott, New York

Analytes	Health Advisory Water Quality Standards[1]	Area	Groundwater Sampling Data															
			ARFF								Aircraft/Helicopter Taxiway		West End of Main Runway		Middle of Main Runway	East Field	Local Television Inc.	East End Hangars
		MW ID	EH-19A		EH-19A1	EH-19A2		EH-19B		EH-19B1	EH-A	CATCH BASIN	EH-P1		EH-P2	EH-P3	EH-10	EH-18
		Date	5/8/2018	3/5/2019	8/10/2018	8/10/2018	3/5/2019	5/8/2018	3/5/2019	8/10/2018	5/8/2018	5/9/2018	5/8/2018	8/10/2018	5/8/2018	5/8/2018	5/8/2018	5/9/2018
Perfluoroalkane Sulfonic Acids																		
Perfluorobutane sulfonic acid (PFBS)	NS		**360**	**40**	**12**	**8.5**	**7.8**	**29**	**200**	**8.5**	.90 U	.90 U	**1.0 J**	.90 U	.90 U	.90 U	.90 U	.90 U
Perfluorohexane sulfonic acid (PFHxS)	NS		**240**	**150**	**1.5 J**	**85**	**18**	**750**	**930**	**3.7 J**	.94 U	.94 U	**3.0 J**	**1.0 J**	.94 U	**1.0 J**	.94 U	.94 U
Perfluoroheptane sulfonic acid (PFHpS)	NS		.88 U	.44 U	.88 U	**2.1 J**	**2.1 J**	**12**	**17**	.88 U	.88 U	.88 U	0.88 UJ	.88 U	.88 U	.88 U	.88 U	.88 U
Perfluorooctane sulfonic acid (PFOS)	70		**5.0**	**2.4**	**1.4 J**	**140**	**150**	**77**	**87 J**	**9.7**	**1.0 J**	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Perfluorodecane sulfonic acid (PFDS)	NS		1.3 U	.30 U	1.3 U	1.3 U	.30 U	1.3 U	.30 U	1.3 U	1.3 U	1.3 U	1.3 UJ	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Perfluoroalkane Carboxylic Acids																		
Perfluorobutanoic acid (PFBA)	NS		**710**	**400**	**3.9 J**	**82**	**51**	**61**	**120**	**8.8**	2.7 U	2.7 U	**3.7 J**	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
Perfluoropentanoic acid (PFPeA)	NS		**2600**	**1200**	1.1 U	**140**	**120**	**170**	**360**	**6.5**	1.1 U	1.1 U	**6.8 J**	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Perfluorohexanoic acid (PFHxA)	NS		**2800**	**1100**	**1.9 J**	**150**	**93**	**200**	**380**	**7.7**	.92 U	.92 U	**9.9 J**	.92 U	.92 U	.92 U	.92 U	.92 U
Perfluoroheptanoic acid (PFHpA)	NS		**1500**	**1100**	1.2 U	**99**	**46**	**180**	**290**	1.2 U	1.6 U	2.6 U	8.0 UJ	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Perfluorooctanoic acid (PFOA)	70		**140**	**170**	**1.2 J**	**34**	**15**	**89**	**120**	**2.1**	.46 U	.46 U	**7.4 J**	.46 U	.46 U	.46 U	.46 U	.46 U
Perfluorononanoic acid (PFNA)	NS		7.0 U	1.1 U	.94 U	**17**	**10**	**14**	**28**	.94 U	1.5 U	2.1 U	8.9 UJ	.94 U	1.0 U	**1.1 J**	.94 U	.94 U
Perfluorodecanoic acid (PFDA)	NS		1.8 U	1.2 U	.52 U	**4.1 J**	**4.4**	2.3 U	**1.8 J**	.52 U	2.3 U	1.5 U	9.5 UJ	.52 U	1.0 U	.93 U	1.0 U	.71 U
Perfluoroundecanoic acid (PFUnDA)	NS		2.6 U	1.5 U	.31 U	**2.2 J**	1.5 U	2.2 U	**1.9 J**	**1.1 J**	1.5 U	1.6 U	**12 J**	**.43 J**	1.3 U	1.1 U	1.4 U	1.2 U
Perfluorododecanoic acid (PFDoDA)	NS		1.1 U	1.3 U	.46 U	.46 U	1.3 U	.63 U	1.3 U	.46 U	.67 U	1.7 U	**21 J**	.46 U	1.1 U	.87 U	.96 U	.86 U
Perfluorotridecanoic acid (PFTrDA)	NS		1.7 U	1.3 U	.75 U	.75 U	1.3 U	1.2 U	1.3 U	.75 U	1.1 U	1.5 U	**20 J**	.75 U	1.2 U	**1.3 J**	1.1 U	1.3 U
Perfluorotetradecanoic acid (PFTeDA)	NS		1.2 U	2.0 U	1.2 U	1.2 U	2.0 U	1.2 U	2.0 U	1.2 U	1.2 U	1.2 U	**19 J**	**1.3 J**	1.2 U	1.2 U	1.2 U	1.2 U
Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	NS		.35 U	.52 U	.35 U	.35 U	.52 U	.35 U	.52 U	.35 U	.35 U	.35 U	.35 UJ	.35 U	.35 U	.35 U	.35 U	.35 U
N-Methyl perfluorooctane sulfonamidoacetic acid	NS		4.2 UJ	1.4 U	4.2 UJ	4.2 UJ	1.4 U	4.2 UJ	1.4 U	4.2 UJ	4.2 UJ	4.2 UJ	4.2 UJ	4.2 U	4.2 UJ	4.2 UJ	4.2 UJ	4.2 UJ
N-Ethyl perfluorooctane sulfonamidoacetic acid	NS		.83 U	.50 U	.83 U	.83 U	.50 U	.83 U	**0.5**	.83 U	.83 U	.83 U	.83 UJ	.83 U	.83 U	.83 U	.83 U	.83 U
(n:2) Fluorotelomer Sulfonic Acids																		
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NS		**7.0**	**4.6**	**1.6 J**	**3.9 J**	**2.8 J**	**120**	**120**	1.2 U	1.2 U	1.2 U	**1.4 J**	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NS		**2.8 J**	**.65 J**	.65 U	**50**	**63**	**14**	**8.7**	**5.0**	.65 U	.65 U	.65 UJ	.65 U	.65 U	.65 U	.65 U	.65 U

Notes:
NS - No standard exists
Detected concentrations are in bold font.
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* - MW-10 is a Suffolk County well installed during a previous investigation (not installed by AECOM)
1 - United States Environmental Protection Agency (US EPA)-established Drinking Water Health Advisory Level (HAL)

Table 1
Groundwater Sampling Data
(May 2018 through March 2019)

East Hampton Airport
200 Daniels Hole Road
Wainscott, New York

Analytes	Health Advisory Water Quality Standards[1]	Area	QA/QC Samples																		
		MW ID	DUP			EQUIPMENT BLANK						FIELD BLANK					MS/MSD				
		Date	5/8/2018	8/10/2018	3/4/2019	5/7/2018	5/8/2018	5/9/2018	8/10/2018	3/4/2019	3/5/2019	5/7/2018	5/8/2018	8/10/2018	3/4/2019	3/5/2019	5/8/2018	5/8/2018	8/10/2018	8/10/2018	3/5/2019
Perfluoroalkane Sulfonic Acids																					
Perfluorobutane sulfonic acid (PFBS)	NS		.90 U	**9.1**	**3.8 J**	.90 U	.90 U	.90 U	.90 U	.28 U	.28 U	.90 U	.90 U	.90 U	.28 U	.28 U	.90 U	.90 U	.90 U	.90 U	.28 U
Perfluorohexane sulfonic acid (PFHxS)	NS		.94 U	**57**	**35**	.94 U	.94 U	.94 U	.94 U	1.3 U	1.3 U	.94 U	.94 U	.94 U	1.3 U	1.3 U	.94 U	.94 U	.94 U	.94 U	1.3 U
Perfluoroheptane sulfonic acid (PFHpS)	NS		.88 U	**1.6 J**	**1.9 J**	.88 U	.88 U	.88 U	.88 U	.44 U	.44 U	.88 U	.88 U	.88 U	.44 U	.44 U	.88 U	.88 U	.88 U	.88 U	.44 U
Perfluorooctane sulfonic acid (PFOS)	70		**1.3 J**	**100**	**120**	1.0 U	1.0 U	1.0 U	1.0 U	.44 U	.44 U	1.0 U	1.0 U	1.0 U	.44 U	.44 U	1.0 U	1.0 U	1.0 U	1.0 U	.44 U
Perfluorodecane sulfonic acid (PFDS)	NS		1.3 U	1.3 U	.30 U	1.3 U	1.3 U	1.3 U	1.3 U	.30 U	.30 U	1.3 U	1.3 U	1.3 U	.30 U	.30 U	1.3 U	1.3 U	1.3 U	1.3 U	.30 U
Perfluoroalkane Carboxylic Acids																					
Perfluorobutanoic acid (PFBA)	NS		2.7 U	**73**	**4.2**	2.7 U	2.7 U	2.7 U	2.7 U	.40 U	.40 U	2.7 U	2.7 U	2.7 U	.40 U	.40 U	2.7 U	2.7 U	2.7 U	2.7 U	.40 U
Perfluoropentanoic acid (PFPeA)	NS		1.1 U	**160**	**3.1 J**	1.1 U	1.1 U	1.1 U	1.1 U	1.7 U	1.7 U	1.1 U	1.1 U	1.1 U	1.7 U	1.7 U	1.1 U	1.1 U	1.1 U	1.1 U	1.7 U
Perfluorohexanoic acid (PFHxA)	NS		.92 U	**130**	8.8 U	.92 U	.92 U	.92 U	.92 U	8.8 U	8.8 U	.92 U	.92 U	.92 U	8.8 U	8.8 U	.92 U	.92 U	.92 U	.92 U	8.8 U
Perfluoroheptanoic acid (PFHpA)	NS		1.2 U	**100**	**3.7 J**	1.2 U	1.2 U	1.2 U	1.2 U	.63 U	.63 U	1.2 U	1.2 U	1.2 U	.63 U	.63 U	1.2 U	**1.4 J**	1.2 U	1.2 U	.63 U
Perfluorooctanoic acid (PFOA)	70		.46 U	**28**	**9.1**	.46 U	.46 U	.46 U	.46 U	.35 U	.35 U	.46 U	.46 U	.46 U	.35 U	.35 U	.46 U	.46 U	.46 U	**.55 J**	.35 U
Perfluorononanoic acid (PFNA)	NS		.94 U	**13**	1.1 U	.94 U	.94 U	.94 U	.94 U	1.1 U	1.1 U	**1.0 J**	.94 U	.94 U	1.1 U	1.1 U	.94 U	**1.1 J**	.94 U	.94 U	1.1 U
Perfluorodecanoic acid (PFDA)	NS		.82 U	3.4 U	1.2 U	.52 U	.73 U	.68 U	.52 U	1.2 U	1.2 U	.71 U	.52 U	.52 U	1.2 U	1.2 U	**.87 J**	**.84 J**	.52 U	**.60 J**	1.2 U
Perfluoroundecanoic acid (PFUnDA)	NS		1.0 U	**1.3 J**	1.5 U	.85 U	.90 U	.73 U	.31 U	1.5 U	1.5 U	.94 U	.87 U	.31 U	1.5 U	1.5 U	**1.1 J**	**1.0 J**	.31 U	.31 U	1.5 U
Perfluorododecanoic acid (PFDoDA)	NS		.58 U	.46 U	1.3 U	.55 U	.80 U	.73 U	.46 U	1.3 U	1.3 U	.75 U	.46 U	.46 U	1.3 U	1.3 U	**.81 J**	**.95 J**	.46 U	.46 U	1.3 U
Perfluorotridecanoic acid (PFTrDA)	NS		.78 U	.75 U	1.3 U	.75 U	.75 U	.75 U	.75 U	1.3 U	1.3 U	.75 U	.75 U	.75 U	1.3 U	1.3 U	.75 U	**.79 J**	.75 U	.75 U	1.3 U
Perfluorotetradecanoic acid (PFTeDA)	NS		1.2 U	1.2 U	2.0 U	1.2 U	1.2 U	1.2 U	1.2 U	2.0 U	2.0 U	1.2 U	1.2 U	1.2 U	2.0 U	2.0 U	1.2 U	1.2 U	1.2 U	1.2 U	2.0 U
Perfluoroalkyl Sulfonamides																					
Perfluorooctane sulfonamide (FOSA)	NS		.35 U	.35 U	.52 U	.35 U	.35 U	.35 U	.35 U	.52 U	.52 U	.35 U	.35 U	.35 U	.52 U	.52 U	.35 U	.35 U	.35 U	.35 U	.52 U
N-Methyl perfluorooctane sulfonamidoacetic acid	NS		4.2 UJ	4.2 U	1.4 U	4.2 UJ	4.2 UJ	4.2 UJ	4.2 UJ	1.4 U	1.4 U	4.2 UJ	4.2 UJ	4.2 UJ	1.4 U	1.4 U	4.2 U	4.2 U	4.2 U	4.2 U	1.4 U
N-Ethyl perfluorooctane sulfonamidoacetic acid	NS		.83 U	.83 U	.50 U	.83 U	.83 U	.83 U	.83 U	.50 U	.50 U	.83U	.83 U	.83 U	.50 U	.50 U	.83 U	.83 U	.83 U	.83 U	.50 U
(n:2) Fluorotelomer Sulfonic Acids																					
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NS		1.2 U	**5.1**	**3.7 J**	1.2 U	1.2 U	1.2 U	1.2 U	.55 U	.55 U	1.2 U	1.2 U	1.2 U	.55 U	.55 U	1.2 U	1.2 U	1.2 U	1.2 U	.55 U
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NS		.65 U	**46**	.15 U	.65 U	.65 U	.65 U	.65 U	.15 U	.15 U	.65 U	.65 U	.65 U	.15 U	.15 U	.65 U	.65 U	.65 U	.65 U	.15 U

Notes:
NS - No standard exists
Detected concentrations are in bold font.
Detections exceeding the US EPA HAL of 70 ng/L for either PFOA, PFOS or a combination of both are highlighted in gray.
J - The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
U - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
UJ - The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Units are in ng/L (nanograms/liter)
* - MW-10 is a Suffolk County well installed during a previous investigation (not installed by AECOM)
1 - United States Environmental Protection Agency (US EPA)-established Drinking Water Health Advisory Level (HAL)

Analytes	Health Advisory Water Quality Standards[1]		Drum Waste Sampling Data			East Hampton Executive Terminal
			Soil		Water	
		Sampling Location	IDW 1	IDW 2	IDW	Tap Water
		Date	12/14/2018	12/14/2018	12/14/2018	12/14/2018
Perfluoroalkane Sulfonic Acids						
Perfluorobutane sulfonic acid (PFBS)	NS		.22 U	.22 U	**200**	.28 U
Perfluorohexane sulfonic acid (PFHxS)	NS		.30 U	.30 U	**610**	1.3 U
Perfluoroheptane sulfonic acid (PFHpS)	NS		.062 U	.062 U	**34**	.44 U
Perfluorooctane sulfonic acid (PFOS)	70		.13 U	.13 U	**150**	.44 U
Perfluorodecane sulfonic acid (PFDS)	NS		.17 U	.17 U	.30 U	.30 U
Perfluoroalkane Carboxylic Acids						
Perfluorobutanoic acid (PFBA)	NS		.39 U	.39 U	**180**	.40 U
Perfluoropentanoic acid (PFPeA)	NS		.21 U	.21 U	**490**	1.7 U
Perfluorohexanoic acid (PFHxA)	NS		.31 U	.31 U	**510**	8.8 U
Perfluoroheptanoic acid (PFHpA)	NS		.19 U	.19 U	**300**	.63 U
Perfluorooctanoic acid (PFOA)	70		.13 U	.13 U	**130**	**.64 J**
Perfluorononanoic acid (PFNA)	NS		.33 U	.33 U	**27**	1.1 U
Perfluorodecanoic acid (PFDA)	NS		.26 U	.26 U	**1.3 J**	1.2 U
Perfluoroundecanoic acid (PFUnDA)	NS		.18 U	.18 U	1.5 U	1.5 U
Perfluorododecanoic acid (PFDoDA)	NS		.27 U	.27 U	1.3 U	1.3 U
Perfluorotridecanoic acid (PFTrDA)	NS		.21 U	.21 U	1.3 U	1.3 U
Perfluorotetradecanoic acid (PFTeDA)	NS		.18 U	.18 U	2.0 U	2.0 U
Perfluoroalkyl Sulfonamides						
Perfluorooctane sulfonamide (FOSA)	NS		.067 U	.067 U	.52 U	**2.1 J**
N-Methyl perfluorooctane sulfonamidoacetic acid	NS		.27 U	.27 U	1.4 U	1.4 U
N-Ethyl perfluorooctane sulfonamidoacetic acid	NS		.20 U	.20 U	.50 U	.50 U
(n:2) Fluorotelomer Sulfonic Acids						
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	NS		.15 U	.15 U	**100**	.55 U
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	NS		.029 U	.029 U	**14**	.15 U

Notes:

NS - No standard exists

Detected concentrations are in bold font.

Detections exceeding the US EPA HAL of 70 ng/L for either PFOA, PFOS or a combination of both are highlighted in gray.

J - The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Units are in ng/L (nanograms/liter)

1 - United States Environmental Protection Agency (US EPA)-established Drinking Water Health Advisory Level (HAL)

APPENDICES

APPENDI A

Fie Photo ra hs

AECOM	East a ton Air ort Danie s o e R ainscott N Phone	**Photo Lo** Written By: Alexandra Golden **Date** 12/7/18-12/11/18 Project Manager: Lindsay Mitchell Project No.: 60566160

Aztech drilling permanent monitoring well EH-19A2.



Aztech drilling permanent monitoring well EH-162.



AECOM	East a ton Air ort Danie s o e R ainscott N Phone	**Photo Lo** Written By: Alexandra Golden **Date** 12/11/18-12/12/18 Project Manager: Lindsay Mitchell Project No.: 60566160

Aztech drilling permanent monitoring well EH-B1.



Aztech decontamination area.



AECOM	East a ton Air ort Danie s o e R ainscott N Phone	**Photo Lo** Written By: Alexandra Golden **Date** 12/11/18-12/12/18 Project Manager: Lindsay Mitchell Project No.: 60566160

Developing monitoring well EH-19A2.



Permanent monitoring well EH-162 completed.



AECOM	East a ton Air ort Danie s o e R ainscott N Phone	**Photo Lo** Written By: Alexandra Golden **Date** 3/6/19 Project Manager: Lindsay Mitchell Project No.: 60566160

C.T. Male on-site to conduct survey of newly installed permanent monitoring wells.



Drums being loaded into a box truck by Environmental Products & Services of Vermont.



AECOM	**East a ton Air ort** **Danie s o e R** **ainscott N** **Phone**	**Photo Lo** Written By: Alexandra Golden **Date** 3/6/19 Project Manager: Lindsay Mitchell Project No.: 60566160

Drums and IDW staging area have been removed.



APPENDI

Dai Re orts

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/4/2018

001		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 40 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck,	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks,	
			Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

1000: AECOM (1) onsite. Review SOW, H+S, waiting for Aztech to arrive onsite.
1130: Aztech onsite (2). Meeting with Jim Brundige to review SOW, H+S, DTM.
1210: Mobilizing to staging area to create decon pad and drum staging pad.
1300: Pads complete. Mobilizing to EH-19A.
1330: Begin drilling at EH-19A (Direct Push - 5' macrocores). Off-setting new well 1' to the west of former temp. well.

1520: Complete sampling at EH-19A to 45 fbg. Will set screen from 32-42 fbg first thing tomorrow. Aztech breaking down and packing up equipment for the day.
1540: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Staging area allowed to use for drilling equipment and deconing, confirmed with Airport Manager Jim Brundige.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/4/2018

001		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Decon Pad.



Drilling at EH-19A.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/5/2018

002		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 27 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck,	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks,	
			Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0700: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0730: Begin augering EH-19A to 44 fbg.
0915: EH-19A augering completed to 44 fbg. Begin installing 2" well. Setting screen from 32-42 fbg.
1020: Filter sand pack and seal complete. Hydrating time released betonite pellets and giving it time to create a proper seal. Moving decon pad from staging area to MW-19 parking area.
1100: Begin grouting EH-19A.
1210: Complete grouting. Aztech begin abandoning former EH-19A 1" temporary well and deconing drill equipment. Filling in 1" borehole with sand and making surface match existing conditions (gravel).
1310: Deconing complete and former EH-19A successfully abandoned. Mobilizing to EH-19A2.
1325: Aztech have 40 drums delivered to the staging area.
1400: Begin PID screening and soil logging at EH-19A2.
1445: Stop drilling for the day. Reach a total depth of 30 fbg at EH-19A2. Aztech cleaning work area and breaking down.
1505: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Staging area allowed to use for drilling equipment and deconing, confirmed with Airport Manager Jim Brundige.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

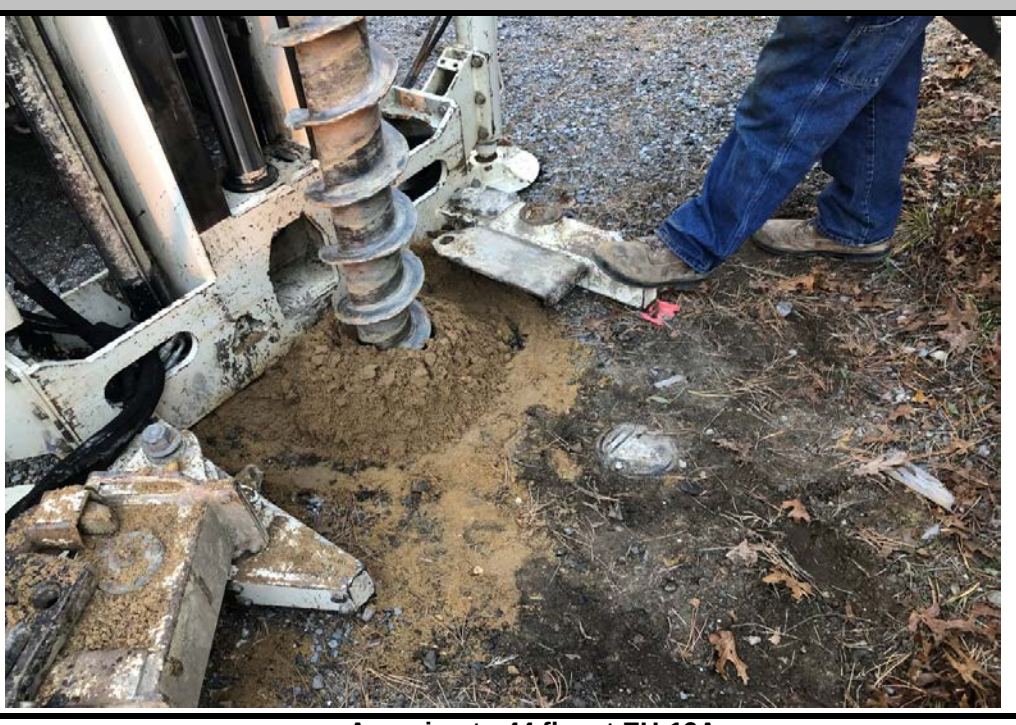
East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/5/2018

002		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Augering to 44 fbg at EH-19A



Deconing drill equipment.



PID screening and soil logging at EH-19A2.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/6/2018

003		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 22 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks, Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0730: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0800: Continue PID screening and soil logging at EH-19A2 from 30 fbg.
0900: Soil logging completed to 45 fbg at EH-19A2. Begin augering to 43 fbg.
0955: Augering complete. Begin installing 2" well. Setting screen from 31-41 fbg.
1115: Filter sand pack and seal complete. Hydrating time released betonite pellets and giving it time to form a proper seal.
1155: Begin grouting EH-19A2.
1250: Complete grouting. Aztech begin abandoning former EH-19A2 1" temporary well. Filling 1" borehole with sand and making surface match existing conditions (soil).
1310: Former EH-19A2 successfully abandoned. Deconing drill rods/auger.
1345: Deconing complete. Mobilizing to EH-19B to begin PID screening and soil logging.
1400: Begin PID screening and soil logging at EH-19B.
1525: Soil logging completed to 45 fbg at EH-19B. Aztech cleaning work area and winterizing equipment.
1545: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Allowed to use staging area for drilling equipment and deconing, confirmed with Airport Manager Jim Brundige.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work. Informed Aztech to put on leather gloves while cutting macrocores.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/6/2018

003		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Augering to 43 fbg at EH-19A2



Deconing drill equipment.



PID screening and soil logging at EH-19B.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/7/2018

004		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 34 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks, Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0700: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0720: Observe drill water is frozen in 250 gallon holding totes - Call PM Lindsay Mitchell. Aztech loading up soil cutting drums and mobilizng to staging area.
0800: Mobilizing rig to EH-19B to begin augering to 43 fbg.
0840: Locate municipal water at East Hampton Executive Terminal. Filling 1 tote with water.
0935: Complete filling tote and augering. Begin installing 2" well. Setting screen from 31-41 fbg.
1020: Filter sand pack and seal complete. Hydrating time released betonite pellets and giving it time to form a proper seal.
1100: Begin grouting EH-19B.
1200: Complete grouting. Aztech begin abandoning former EH-19B 1" temporary well. Filling 1" borehole with sand and making surface match existing conditions (soil).
1225: Former EH-19B successfully abandoned. Deconing drill rods/auger.
1300: Deconing complete. Decon water transferred to drum. Mobilizing to staging area to drop off 3 drums.
1315: Covering drum staging area with poly. 9 soil and 1 decon water drums generated in first week.
1325: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Allowed to use staging area for drilling equipment and deconing, confirmed with Airport Manager Jim Brundige.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work. Informed Aztech to put on leather gloves while cutting macrocores.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/7/2018

004		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Augering to 43 fbg at EH-19B.



Deconing drill equipment.



Drum staging pad covered with poly.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/10/2018

005		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 30 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks, Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0700: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0715: Installing well pads/manholes at EH-19A, EH-19A2, and EH-19B.
0820: Wells pads completed. Mobilizing to EH-1.
0845: Begin soil logging and PID screening at EH-1, off-setting 1' to the North of former 1" EH-1 temporary well.
1040: Complete soil logging at EH-1. Begin augering to 40 fbg.
1120: Augering complete. Begin installing 2" well. Setting screen from 28-38 fbg.
1330: Complete installing EH-1 and abandoning former 1" EH-1 temporary well. Loading up rig and equipment. Moving decon pad from E. Hampton Airport fire house parking lot to staging area.
1425: Re-building decon pad and deconing drill rods/augers.
1510: Complete deconing. Mobilizing to EH-162
1525: Off-loading rig and setting up at EH-162.
1555: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Allowed to use staging area for drilling equipment and deconing, confirmed with Airport Manager Jim Brundige.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work. Informed Aztech to put on leather gloves while cutting macrocores.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/10/2018

005		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos







Well pads completed at EH-19A, EH-19A2, and EH-19B.



Soil logging and PID screening at EH-1.



Deconing drill rods and augers.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/11/2018

006		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 21 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks, Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0700: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0725: Begin soil logging and PID screening at EH-162.
0845: Complete soil logging at EH-162 to 40 fbg. Begin augering and installing 2" well. Setting screen from 23-33 fbg. Offsetting 1' to the North of former 1" temporary well.
1155: Complete installing EH-162. Sucuessfully abandoned fromer 1" EH-162 temporary well. Mobilizing to staging area to decon.
1245: Complete deconing. Mobilizing to EH-B1.
1310: Begin soil logging and PID screening at EH-B1.
1425: Complete soil logging at EH-B1 to 35 fbg. Begin augering and installing 2" well. Setting screen from 25-35 fbg. Offsetting 1' to the North of former 1" temporary well.
1545: Complete installing sand pack at EH-B1. Will start off tomorrow AM installing bentonite seal.
1600: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Allowed to use staging area for drilling equipment and deconing, confirmed with Airport Manager Jim Brundige.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work. Informed Aztech to put on leather gloves while cutting macrocores.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/11/2018

006		**WRITTEN BY**: Greg Dunlavey	60566160

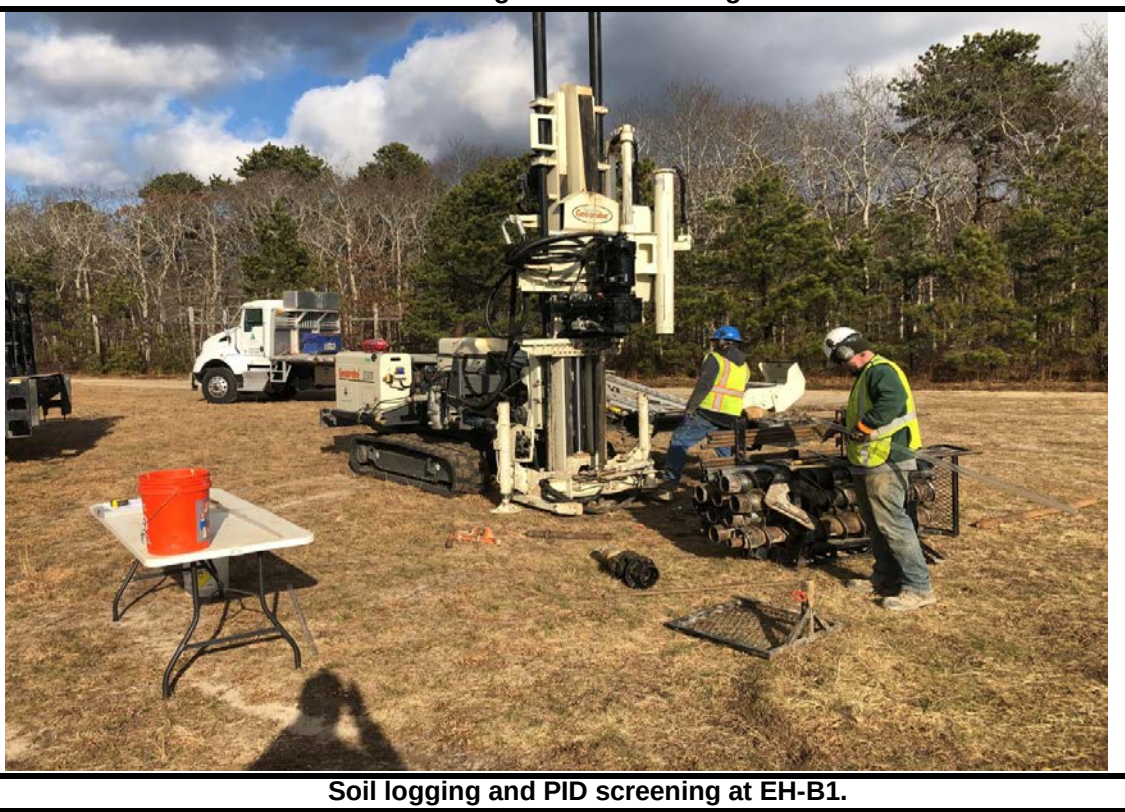
Daily Photos



Soil logging and PID screening at EH-162.



Deconing drill rods and augers.



Soil logging and PID screening at EH-B1.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/12/2018

007		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 34 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck	
Robert Gannon	Drill Team	Aztech	2 PIDs, DTW meter	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks, Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0700: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0715: Continue installing EH-B1 (bentonite seal and grout).
0840: Complete installing EH-B1. Sucuessfully abandoned fromer 1" EH-B1 temporary well. Mobilizing to staging area to decon.
0900: Complete deconing. Mobilizing to EH-162 and EH-1 to install manholes/well pads.
1005: Complete installing manholes/well pads. Mobilizing to EH-19A to begin development.
1455: Complete development at EH-19A, EH-19A2, EH-19B, EH-1, and EH-162. Ten well volumes was removed from each well. Mobilizing to staging area to drop off development water drums.
1530: AECOM and Aztech offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- The monitoring wells will be considered developed when either ten well volumes are removed or the turbidity is less than 10 NTU. Drum count: 5 water and 17 soil.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work. Informed Aztech to put on leather gloves while cutting macrocores.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/12/2018

007		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Deconing drill rods and augers.





Completed well pads/manholes at EH-162 (Left) and EH-1 (Right).







Well development.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/13/2018

008		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 32 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck,	
Robert Gannon	Drill Team	Aztech	YSI, and DTW meter.	
Michael Deyetie	Drill Team	Aztech	Aztech - 2 work trucks,	
			Geoprobe 3230DT	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
Aztech Env. Services	
AECOM	

SUMARY WORKED PERFORMED

0700: AECOM (1) and Aztech (2) onsite. Review SOW, H+S, DTM. Calibrate equipment.
0735: Begin developing EH-B1.
0800: Complete development at EH-B1. Ten well volumes removed. Begin installing well pad/manhole at EH-B1.
0825: Complete well pad/manhole. Mobilizing to staging area to expand drum pad and pack up equipment.
1030: Aztech (2) offsite. Mobilizing to newly installed monitoring wells to mark with stake and flag.
1100: Complete marking all locations. Confirming Executive Terminal will be open tomorrow to grab sample and organizing field paperwork.
1130: Excecutive Terminal will be open at 9AM. AECOM offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Drum count: 5 water and 17 soil.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- No sampling performed.	- Not applicable

QUALITY CONTROL ACTIVITIES

- Drilling equipment is being decontaminated between wells using a power washer. All drill/decon water and soil cuttings are being containerized in 55 gallon drums. Aztech using PFC free water during drill activities.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- Performing periodic upwind and downwind air monitoring with PID.

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Everyone wore proper PPE and were careful walking on the un-even terrain. Daily machine inspections and pre-work safety meetings. Checking on contractor throughout day to make sure they're fit to work.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/13/2018

008		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Well development at EH-B1.



Completed well pad/manhole at EH-B1.



Drum pad staging area.

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/14/2018

009		**WRITTEN BY**: Greg Dunlavey	60566160

Weather: Clear 39 Degrees

NAME:	TRADE:	COMPANY:	EQUIPMENT:	VISITORS:
Greg Dunlavey	Geologist	AECOM	URS - 1 work truck.	

CONTRACTORS:	SITE DELIVERIES (indicate size, type, and condition):
AECOM	

SUMARY WORKED PERFORMED

0800: AECOM (1) onsite. Review SOW, H+S, DTM. Preparing bottleware and opening drums.
0840: Begin collecting composite IDW samples.
0925: Complete IDW sampling. Mobilizing to Executive Terminal to grab municipal water sample. Allowed faucet to flush for 2 minutes prior to collecting sample.
1000: Complete Terminal sampling. Mobilizing back to staging area to close drums and cover with poly.
1035: AECOM offsite.

AGREEMENTS MADE/CONVERSATIONS (Refer to telecons, phone records, and/or logbooks for details)

- Drum count: 5 water and 17 soil.

SAMPLING PERFORMED:	SOIL EROSION CONTROLS - INSPECTION
- IDW(Soil 1)121418, IDW(Soil 2)121418, IDW(Water)121418, and Terminal 121418.	- Not applicable

QUALITY CONTROL ACTIVITIES

- PFC free clothing and equipment were used while samples were collected. Followed PFC sampling protocol.

REQUEST FOR INFORMATION (RFI)

- None

TRANSMITTALS / SUBMITTALS

- None

AIR MONITORING COMMENTS:

- None

SAFETY OBSERVATIONS/VIOLATIONS/COMMENTS

- Wore proper PPE and careful walking on the un-even terrain.

CORRECTIVE ACTIONS IMPLEMENTED

- None

Ovesight By (Signature): Greg Dunlavey

East Hampton Airport
200 Daniels Hole Rd
Wainscott, NY 11975

Daily Report

DATE: 12/14/2018

009		**WRITTEN BY**: Greg Dunlavey	60566160

Daily Photos



Drum pad staging area.



Terminal 121418 sample location.

AECOM	East Hampton Airport 200 Daniels Hole Rd Wainscott, NY 11975	**Daily Report**
		Written By: Alexandra Golden
		Date: 03/04/2019
Project Name/Number: East Hampton Airport / 60566160		PM: Lindsay Mitchell
Site Location: 200 Daniels Hole Rd, Wainscott NY		
Weather: Rainy, 35°		

Name:	Trade:	Company:	Equipment:
Alexandra Golden	Geologist	AECOM	Peri-pump, HDPE tubing, truck YSI, NTU, DTW meter, bottle ware
Greg Dunlavey	Environmental Scientist	AECOM	
Matt Liberta	Crew Chief	CT Male	Survey equipment and work truck
Jim Gavigan	Instrument Operator	CT Male	
Jim Brundige	Airport Manager	East Hampton Airport	

Summary of Work Performed:

Time	Activity
0800	AECOM (2) meet with CT Male (2) and mobilize to the site.
0835	Meet at site; discuss SOW and timeline with Airport Manager.
0900	Review HASP and SOW; calibrate equipment.
0910	Set up on well EH-19A.
0940	Water too deep for peri-pump; discuss options with PM; mobilize to EH-B1.
1005	Start purging EH-B1.
1040	Sample EH-B1.
1050	Mobilize to EH-162.
1150	Sample EH-162 as well as DUP, Field Blank and Equipment Blank.
1220	Check on CT Male's progress.
1240	Lindsay Mitchell calls, requests check on purge water drum staging area.
1300	Set up on EH-1.
1355	Sample EH-1.
1400	Meet up with CT Male, check their progress.
1420	Drop off purge water; break apart ice around drums.
1500	CT Male (2) off-site signed out and handed in parking pass.
1515	AECOM (2) off-site.

Agreements Made/Conversations:

Lindsay Mitchell orders PFC free bailers to be delivered to the site the following day in order to sample wells with water levels deeper than peri-pump sampling constraints.

Sampling Performed:

EH-B1 030419, EH-162 030419, Field Blank 030419, Equipment Blank 030419, EH-1 030419, DUP

Quality Control Activities:

- Duplicate sample taken, field blank taken and equipment blank taken on HDPE tubing
- Purge water stored in drums in staging area.

Request for Information:

None.

Air Monitoring Comments:

None.

Safety Observations/Comments:

Discussed proper clothing and PPE for activities and the day's weather.

Corrective Action Performed:

None.

Oversight By (signature):

Name: Alexandra Golden

AECOM	East Hampton Airport 200 Daniels Hole Rd Wainscott, NY 11975	**Daily Photos** Written By: Alexandra Golden Date: 03/04/2019 PM: Lindsay Mitchell

CT Male (2) on-site.



AECOM	East Hampton Airport 200 Daniels Hole Rd Wainscott, NY 11975	**Daily Report**
		Written By: Alexandra Golden
		Date: 03/05/2019
Project Name/Number: East Hampton Airport / 60566160		PM: Lindsay Mitchell
Site Location: 200 Daniels Hole Rd, Wainscott NY		
Weather: Sunny, 25 °		

Name:	Trade:	Company:	Equipment:
Alexandra Golden	Geologist	AECOM	PFC free bailers, string, truck YSI, NTU, DTW meter, bottle ware
Greg Dunlavey	Environmental Scientist	AECOM	

Summary of Work Performed:

Time	Activity
0900	AECOM (2) mobilize to the site.
0930	Arrive on-site, discuss HASP and SOW and calibrate equipment.
1000	UPS delivery of PFC free bailers arrives to airport office.
1015	Set up on well EH-19A.
1030	Start purging EH-19A.
1100	Sample EH-19A.
1115	Bathroom break.
1130	Mobilize to EH-19A2.
1150	Start purging EH-19A2.
1215	Sample EH-19A2.
1230	Field Blank taken.
1245	Leave site for bathroom/more ice for samples.
1300	Mobilize to EH-19B.
1340	Sample EH-19B.
1400	Drop off purge water.
1440	AECOM (2) off-site.

Agreements Made/Conversations:

None.

Sampling Performed:

EH-19A 030519, EH-19A2 030519, Field Blank 030519, Equipment Blank 030519, EH-19B 030519, MS & MSD

Quality Control Activities:

- MS/MSD samples taken, field blank taken and equipment blank taken on bailer and string
- Purge water stored in drums in staging area.

Request for Information:

None.

Air Monitoring Comments:

None.

Safety Observations/Comments:

Discussed proper clothing and PPE for activities and the day's weather.

Corrective Action Performed:

None.

Oversight By (signature):

Name: Alexandra Golden

AECOM	East Hampton Airport 200 Daniels Hole Rd Wainscott, NY 11975	**Daily Report**
		Written By: Alexandra Golden
		Date: 03/06/2019
Project Name/Number: East Hampton Airport / 60566160		PM: Lindsay Mitchell
Site Location: 200 Daniels Hole Rd, Wainscott NY		
Weather: Sunny, 25 °		

Name:	Trade:	Company:	Equipment:
Alexandra Golden	Geologist	AECOM	PFC free bailers, string, truck YSI, NTU, DTW meter, bottle ware
Greg Dunlavey	Environmental Scientist	AECOM	
Gregory Dawson	Deliveryman	Sunbelt Rentals	Skid Steer and flatbed truck
Chris Abbey	Employee	EPS	Box truck and general tools
Joe Wickham	Employee	EPS	

Summary of Work Performed:

Time	Activity
0900	AECOM (2) review HASP and SOW, mobilize to the site.
0935	Arrive on-site, receive phone call from Sunbelt Rentals and confirm meeting place.
0950	Skid steer (Sunbelt) on-site, AECOM confirms pick-up time with Sunbelt employee.
1015	Sunbelt Rentals (1) off-site.
1100	EPS (2) on-site for pallet and drum pickup.
1215	All drums and pallet/staging equipment loaded into EPS box truck: 19 soil drums and 3 water.
1230	EPS (2) and AECOM (2) off-site.

Agreements Made/Conversations:

None.

Sampling Performed:

None.

Quality Control Activities:

None.

Request for Information:

None.

Air Monitoring Comments:

None.

Safety Observations/Comments:

Discussed proper clothing and PPE for activities and the day's weather. Discussed skid steer operation.

Corrective Action Performed:

None.

Oversight By (signature):

Name: Alexandra Golden

AECOM	East Hampton Airport 200 Daniels Hole Rd Wainscott, NY 11975	**Daily Photos** Written By: Alexandra Golden Date: 03/06/2019 PM: Lindsay Mitchell

Drums being loaded into box truck.



EPS operating Skid Steer.



Drums and staging area removed.



APPENDI C

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onitorin e Constr ction Detai s an e De e o ent Lo s

DRILLING SUMMARY

Geologist: Greg Dunlavey

Drilling Company: Aztech Environmental Technologies

Driller: Bob Gann

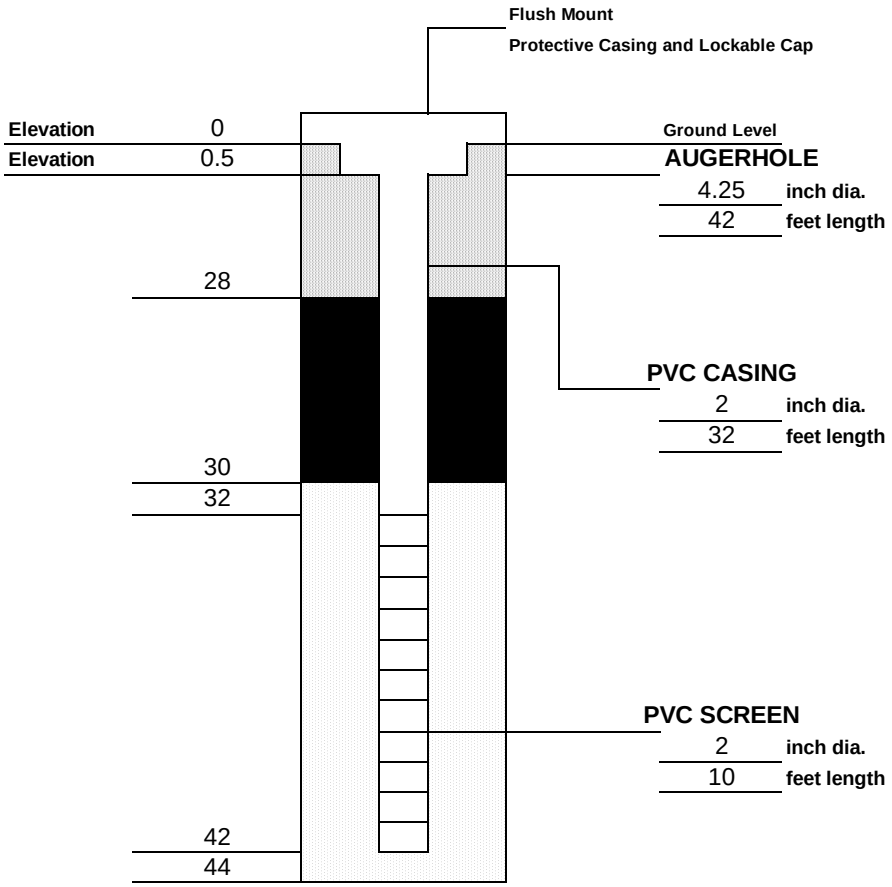
Rig Make/Model: Geoprobe 3230DT

Date: 12/5/2018

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #0 Sand **Setting:**
Monitor: 2" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

44-30 fbg = #0 sand pack
30-28 fbg = bentonite seal, time released pellet
28-.5 fbg = grout

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: East Hampton Airport**	**Project No.: 60566160**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** EH-19A

DRILLING SUMMARY

Geologist: Greg Dunlavey

Drilling Company: Aztech Environmental Technologies

Driller: Bob Gann

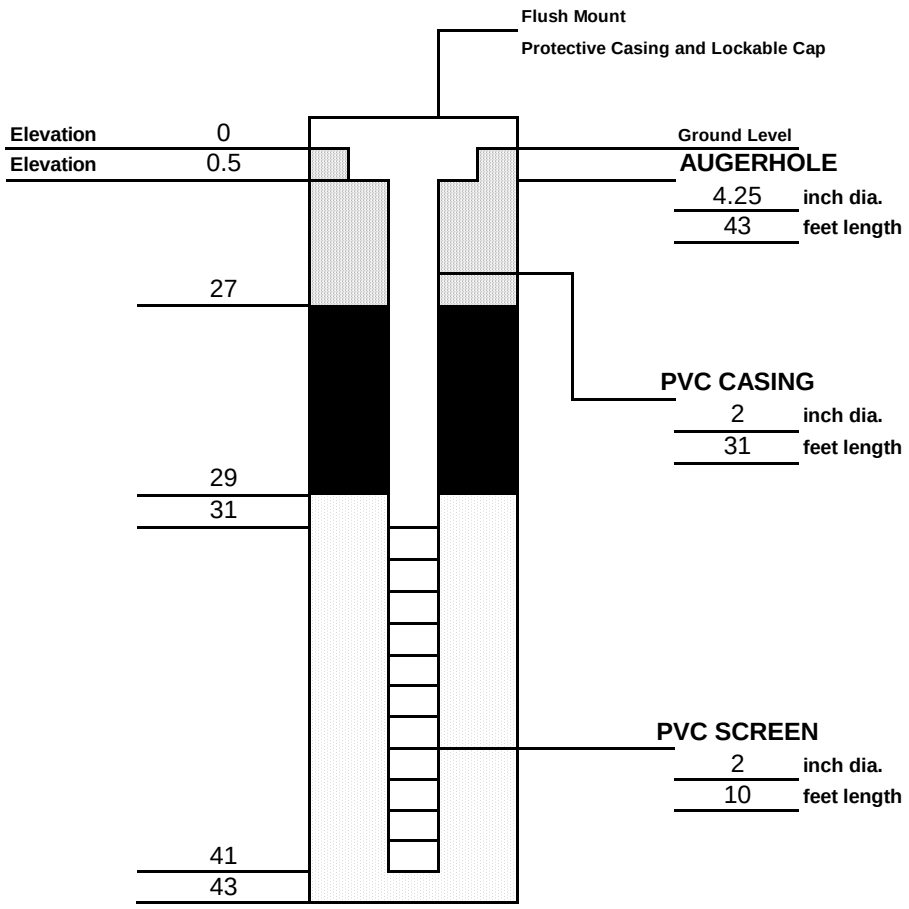
Rig Make/Model: Geoprobe 3230DT

Date: 12/6/2018

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #0 Sand **Setting:**
Monitor: 2" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

43-29 fbg = #0 sand pack
29-27 fbg = bentonite seal, time released pellet
27-.5 fbg = grout

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: East Hampton Airport**	**Project No.: 60566160**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** EH-19A2

DRILLING SUMMARY

Geologist: Greg Dunlavey

Drilling Company: Aztech Environmental Technologies

Driller: Bob Gann

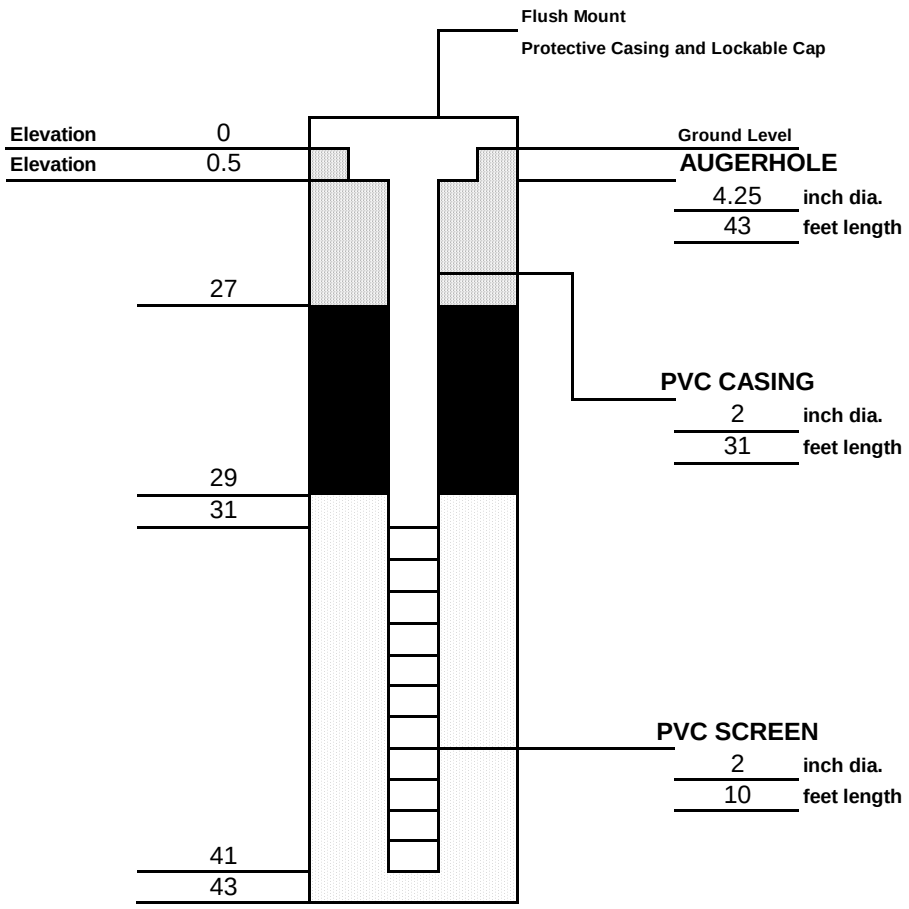
Rig Make/Model: Geoprobe 3230DT

Date: 12/7/2018

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #0 Sand **Setting:**
Monitor: 2" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

43-29 fbg = #0 sand pack
29-27 fbg = bentonite seal, time released pellet
27-.5 fbg = grout

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: East Hampton Airport**	**Project No.: 60566160**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** EH-19B

DRILLING SUMMARY

Geologist: Greg Dunlavey

Drilling Company: Aztech Environmental Technologies

Driller: Bob Gann

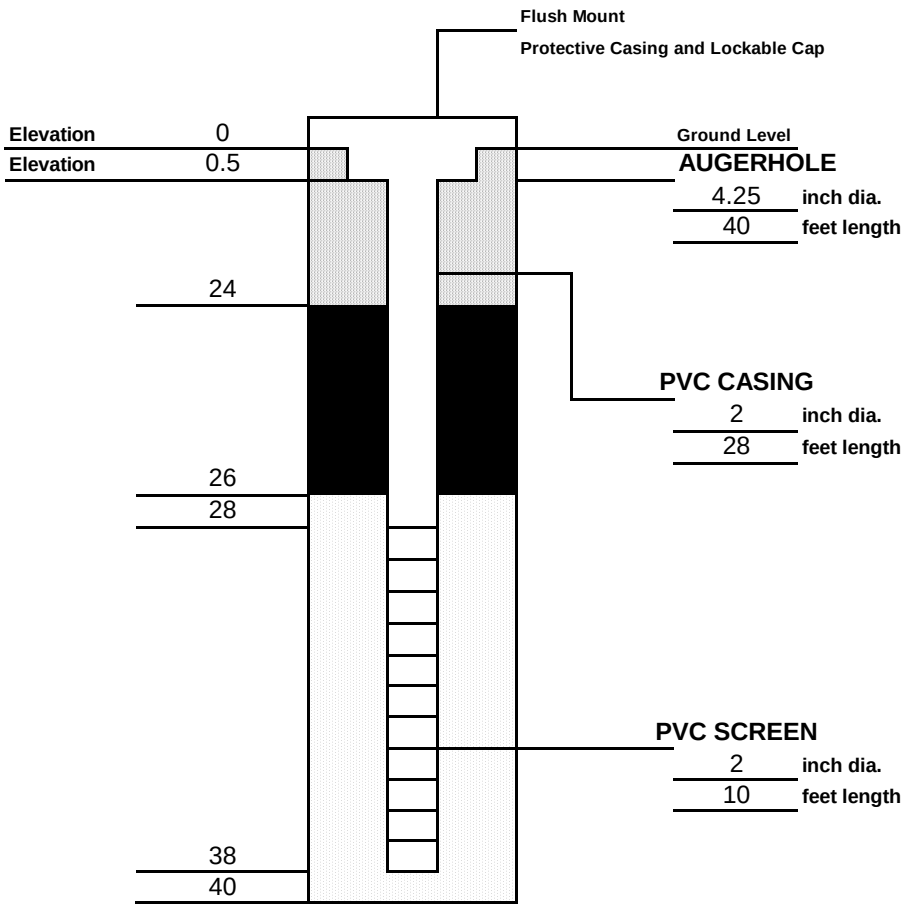
Rig Make/Model: Geoprobe 3230DT

Date: 12/10/2018

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #0 Sand **Setting:**
Monitor: 2" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

40-26 fbg = #0 sand pack
26-24 fbg = bentonite seal, time released pellet
24-.5 fbg = grout

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: East Hampton Airport**	**Project No.: 60566160**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** EH-1

DRILLING SUMMARY

Geologist: Greg Dunlavey

Drilling Company: Aztech Environmental Technologies

Driller: Bob Gann

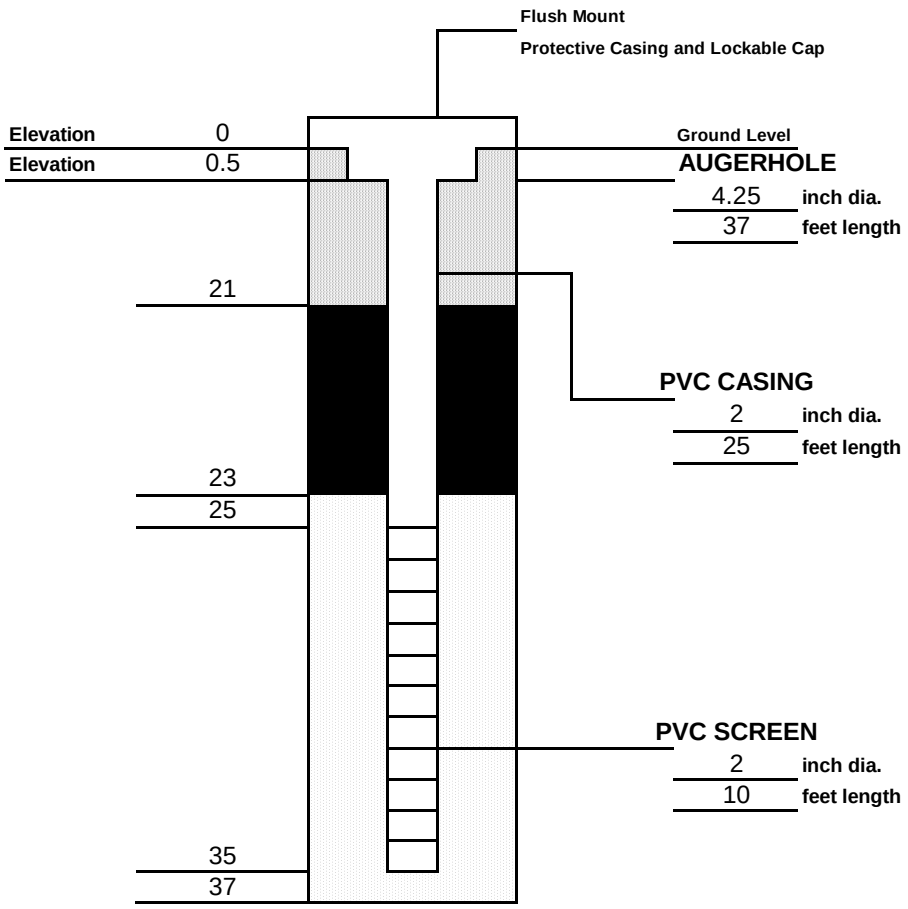
Rig Make/Model: Geoprobe 3230DT

Date: 12/11/2018

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #0 Sand **Setting:**
Monitor: 2" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

37-23 fbg = #0 sand pack
23-21 fbg = bentonite seal, time released pellet
21-.5 fbg = grout

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: East Hampton Airport**	**Project No.: 60566160**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** EH-B1

DRILLING SUMMARY

Geologist: Greg Dunlavey

Drilling Company: Aztech Environmental Technologies

Driller: Bob Gann

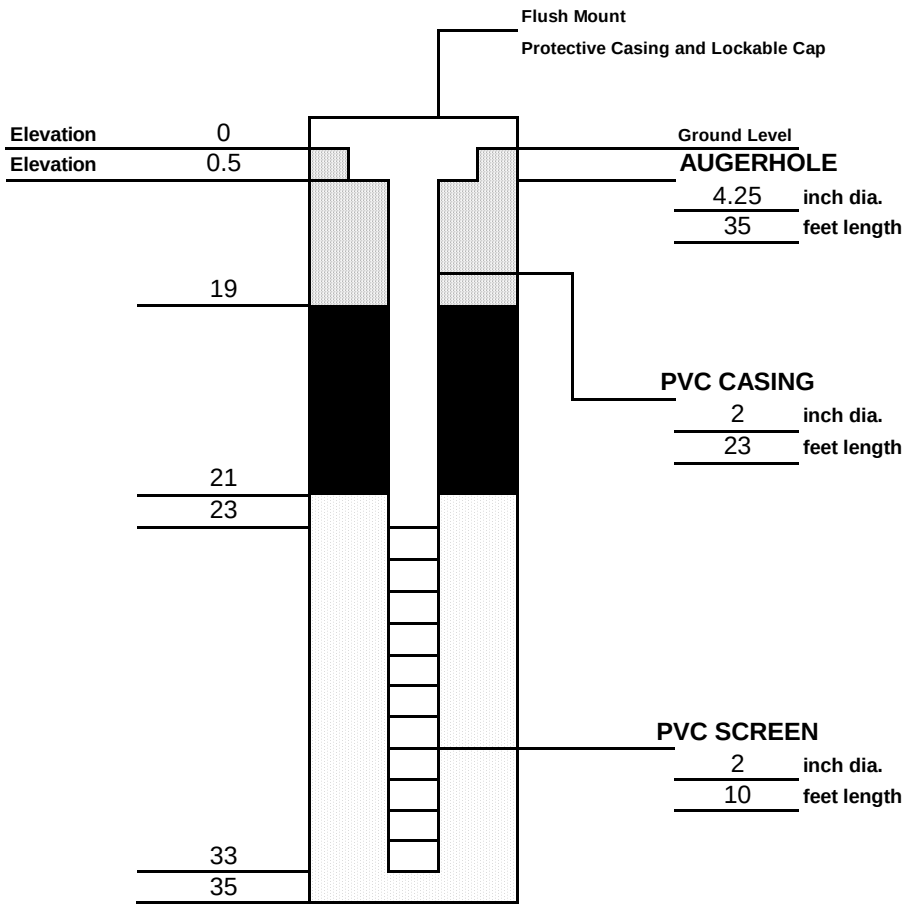
Rig Make/Model: Geoprobe 3230DT

Date: 12/11/2018

GEOLOGIC LOG

Depth(ft.)	Description

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** #0 Sand **Setting:**
Monitor: 2" PVC	**Slot Size:** .020"	***SEAL MATERIAL***
		Type: Bentonite **Setting:**

COMMENTS:

35-21 fbg = #0 sand pack
21-19 fbg = bentonite seal, time released pellet
19-.5 fbg = grout

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: NYSDEC	**Location: East Hampton Airport**	**Project No.: 60566160**
AECOM	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** EH-162

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19A Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	42.06	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	34.64	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.21	gal
6. 3(V) = Target Purge Volume	12.10	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	**Units**	**Readings**						
Time	24 hr	1023	1028	1035	1037	1041	1046	1050
Water Level (0.33)	feet	34.64	-	-	-	-	-	-
Volume Purged	gal	1.21	2.42	3.84	5.05	6.26	7.47	8.68
Turbidity (+/- 10%)	NTU	>1100	>1100	>1100	>1100	>1100	>1100	692.1
Eh / ORP (+/- 10)	MeV	199.1	190.4	187.6	198.8	205.4	193.7	184.2
Specific Conductivity (+/- 3%)	mS/cm^c	148.2	137.2	134.8	144.2	131.6	150.2	141.9
pH (+/- 0.1)	pH unit	8.35	8.31	8.01	8.06	7.88	7.81	7.72
Temp (+/- 0.5)	C°	11.10	10.90	11.50	11.70	12.20	12.60	12.80
Color	Visual	Brown	Brown	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Start purge time: 1019
End purge time: 1105
Total gallons removed: 12.31

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19A Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	42.06	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	34.64	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.21	gal
6. 3(V) = Target Purge Volume	12.10	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1054	1058	1105				
Water Level (0.33)	feet	-	-	-				
Volume Purged	gal	9.89	11.10	12.31				
Turbidity (+/- 10%)	NTU	513.2	371.7	251.4				
Eh / ORP (+/- 10)	MeV	190.7	192.4	195.3				
Specific Conductivity (+/- 3%)	mS/cm[c]	132.6	127.1	130.8				
pH (+/- 0.1)	pH unit	7.78	7.69	7.65				
Temp (+/- 0.5)	C°	12.80	13.10	13.20				
Color	Visual	Cloudy	Cloudy	Cloudy				
Odor	Olfactory	None	None	None				

Comments:

Start purge time: 1019
End purge time: 1105
Total gallons removed: 12.31

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19A2 Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	40.54	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	35.81	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.82	gal
6. 3(V) = Target Purge Volume	8.20	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1119	1123	1126	1128	1130	1132	1135
Water Level (0.33)	feet	35.81	-	-	-	-	-	-
Volume Purged	gal	0.82	1.64	2.46	3.28	4.10	4.42	5.74
Turbidity (+/- 10%)	NTU	>1100	>1100	>1100	>1100	>1100	846.1	541.4
Eh / ORP (+/- 10)	MeV	230.9	218.2	225.7	219.1	212.8	207.3	197.3
Specific Conductivity (+/- 3%)	mS/cm[c]	130.8	128.1	128.5	125.7	126.2	122.3	121.4
pH (+/- 0.1)	pH unit	8.77	8.52	8.38	8.19	8.31	7.98	7.91
Temp (+/- 0.5)	C°	12.40	12.60	12.40	12.30	12.70	12.70	12.40
Color	Visual	Brown	Brown	L. Brown	L. Brown	Cloudy	L. Brown	Cloudy
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Start purge time: 1116
End purge time: 1142
Total gallons removed: 8.2

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19A2 Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	40.54	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	35.81	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.82	gal
6. 3(V) = Target Purge Volume	8.20	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1137	1140	1142				
Water Level (0.33)	feet	-	-	-				
Volume Purged	gal	6.56	7.38	8.20				
Turbidity (+/- 10%)	NTU	333.5	262.1	182.9				
Eh / ORP (+/- 10)	MeV	205.9	200.3	202.1				
Specific Conductivity (+/- 3%)	mS/cm[c]	119.8	120.1	119.5				
pH (+/- 0.1)	pH unit	7.96	8.00	7.99				
Temp (+/- 0.5)	C°	12.80	12.60	12.90				
Color	Visual	Cloudy	Cloudy	Cloudy				
Odor	Olfactory	None	None	None				

Comments:

Start purge time: 1116
End purge time: 1142
Total gallons removed: 8.2

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19B Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	41.11	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	34.33	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.11	gal
6. 3(V) = Target Purge Volume	11.10	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1215	1218	1220	1223	1226	1230	1233
Water Level (0.33)	feet	34.33	-	-	-	-	-	-
Volume Purged	gal	1.11	2.22	3.33	4.44	5.55	6.66	7.77
Turbidity (+/- 10%)	NTU	>1100	>1100	>1100	>1100	>1100	>1100	761.9
Eh / ORP (+/- 10)	MeV	218.1	202.1	210.8	194.3	200.8	186.1	181.7
Specific Conductivity (+/- 3%)	mS/cm[c]	160.8	144.1	165.9	151.2	138.3	131.8	122.4
pH (+/- 0.1)	pH unit	8.03	7.88	8.10	7.79	7.58	7.64	7.51
Temp (+/- 0.5)	C°	11.30	12.00	12.10	13.20	13.20	13.20	13.60
Color	Visual	Brown	Brown	Cloudy	Cloudy	Cloudy	Cloudy	Cloudy
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Start purge time: 1210
End purge time: 1243
Total gallons removed: 11.10

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19B Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	41.11	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	34.33	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.11	gal
6. 3(V) = Target Purge Volume	11.10	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1236	1239	1243				
Water Level (0.33)	feet	-	-	-				
Volume Purged	gal	8.88	9.99	11.10				
Turbidity (+/- 10%)	NTU	545.3	407.8	473.1				
Eh / ORP (+/- 10)	MeV	184.5	180.3	178.6				
Specific Conductivity (+/- 3%)	mS/cm[c]	126.9	116.5	119.2				
pH (+/- 0.1)	pH unit	7.57	7.45	7.49				
Temp (+/- 0.5)	C°	13.70	13.80	13.80				
Color	Visual	Cloudy	Cloudy	Cloudy				
Odor	Olfactory	None	None	None				

Comments:

Start purge time: 1210
End purge time: 1243
Total gallons removed: 11.1

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-1 Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	38.85	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	30.64	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.34	gal
6. 3(V) = Target Purge Volume	13.40	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1307	1311	1315	1319	1326	1331	1335
Water Level (0.33)	feet	30.64	-	-	-	-	-	-
Volume Purged	gal	1.34	2.68	4.02	5.36	6.70	8.04	9.38
Turbidity (+/- 10%)	NTU	>1100	>1100	>1100	>1100	>1100	946.2	747.7
Eh / ORP (+/- 10)	MeV	190.2	205.6	196.8	193.1	197.4	188.9	184.3
Specific Conductivity (+/- 3%)	mS/cm[c]	151.1	155.7	160.1	153.7	145.6	145.3	138.8
pH (+/- 0.1)	pH unit	8.41	8.21	8.28	8.18	7.99	7.82	7.92
Temp (+/- 0.5)	C°	11.00	10.80	11.30	11.30	11.90	12.10	12.20
Color	Visual	Brown	Brown	L. Brown	L. Brown	Cloudy	Cloudy	Cloudy
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Start purge time: 1303
End purge time: 1351
Total gallons removed: 13.40

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-1 Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	38.85	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	30.64	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.34	gal
6. 3(V) = Target Purge Volume	13.40	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1340	1345	1351				
Water Level (0.33)	feet	-	-	-				
Volume Purged	gal	10.72	12.06	13.40				
Turbidity (+/- 10%)	NTU	601.9	280.8	182.3				
Eh / ORP (+/- 10)	MeV	183.4	189.1	185.3				
Specific Conductivity (+/- 3%)	mS/cm[c]	136.3	140.9	141.8				
pH (+/- 0.1)	pH unit	7.66	7.76	7.62				
Temp (+/- 0.5)	C°	12.70	12.80	12.80				
Color	Visual	Cloudy	Cloudy	Cloudy				
Odor	Olfactory	None	None	None				

Comments:

Start purge time: 1303
End purge time: 1351
Total gallons removed: 13.4

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-162 Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	33.12	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	23.96	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	1.49	gal
6. 3(V) = Target Purge Volume	14.90	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1424	1426	1429	1431	1434	1437	1439
Water Level (0.33)	feet	23.96	-	-	-	-	-	-
Volume Purged	gal	1.49	2.98	4.47	5.96	7.45	8.94	10.43
Turbidity (+/- 10%)	NTU	>1100	>1100	>1100	>1100	>1100	>1100	>1100
Eh / ORP (+/- 10)	MeV	201.8	194.3	196.8	202.1	189.7	186.2	194.5
Specific Conductivity (+/- 3%)	mS/cm^c	138.3	145.9	154.2	135.1	136.3	122.3	130.3
pH (+/- 0.1)	pH unit	8.03	8.06	7.88	7.81	7.84	7.66	7.73
Temp (+/- 0.5)	C°	11.10	12.00	12.00	12.50	12.50	12.60	12.80
Color	Visual	Brown	Brown	Brown	L. Brown	L. Brown	L. Brown	L. Brown
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Start purge time: 1412
End purge time: 1449
Total gallons removed: 14.90

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-162 Date: December 12, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	33.12	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	23.96	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	1.49	gal
6. 3(V) = Target Purge Volume	14.90	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1442	1445	1449				
Water Level (0.33)	feet	-	-	-				
Volume Purged	gal	11.92	13.41	14.90				
Turbidity (+/- 10%)	NTU	>1100	982.3	>1100				
Eh / ORP (+/- 10)	MeV	184.3	181.9	192.7				
Specific Conductivity (+/- 3%)	mS/cm^c	128.2	130.9	127.9				
pH (+/- 0.1)	pH unit	7.63	7.68	7.52				
Temp (+/- 0.5)	C°	13.10	13.10	13.20				
Color	Visual	Cloudy	Cloudy	Cloudy				
Odor	Olfactory	None	None	None				

Comments:

Start purge time: 1412
End purge time: 1449
Total gallons removed: 14.9

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-B1 Date: December 13, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	34.82	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	28.98	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = C(3.14159)(0.5D)^2(7.48)	0.95	gal
6. 3(V) = Target Purge Volume	9.50	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	0739	0742	0744	0746	0748	0751	0753
Water Level (0.33)	feet	28.98	-	-	-	-	-	-
Volume Purged	gal	0.95	1.90	2.85	3.80	4.75	5.70	6.65
Turbidity (+/- 10%)	NTU	>1100	>1100	>1100	>1100	987.1	801.2	402.7
Eh / ORP (+/- 10)	MeV	199.7	191.2	186.7	185.0	181.1	183.3	188.1
Specific Conductivity (+/- 3%)	mS/cm^c	141.3	141.4	134.6	136.7	135.3	134.6	133.1
pH (+/- 0.1)	pH unit	8.32	8.35	8.37	8.21	8.18	8.07	8.01
Temp (+/- 0.5)	C°	10.90	11.80	12.30	12.50	12.80	12.80	12.80
Color	Visual	Brown	Brown	Brown	L. Brown	L. Brown	L. Brown	Cloudy
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Start purge time: 0737
End purge time: 0800
Total gallons removed: 9.50

Monitoring Well Development Log

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-B1 Date: December 13, 2018

Samplers: Greg Dunlavey

Sample Number: - QA/QC Collected? -

Purging / Sampling Method: Waterra Pump HDPE tubing

1. L = Well Depth:	34.82	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	28.98	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	0.95	gal
6. 3(V) = Target Purge Volume	9.50	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	0755	0757	0800				
Water Level (0.33)	feet	-	-	-				
Volume Purged	gal	7.60	8.55	9.50				
Turbidity (+/- 10%)	NTU	288.3	301.8	241.3				
Eh / ORP (+/- 10)	MeV	187.9	191.8	190.3				
Specific Conductivity (+/- 3%)	mS/cm[c]	130.1	131.3	129.8				
pH (+/- 0.1)	pH unit	7.95	7.90	7.81				
Temp (+/- 0.5)	C°	12.90	12.90	13.00				
Color	Visual	Cloudy	Cloudy	Cloudy				
Odor	Olfactory	None	None	None				

Comments:

Start purge time: 0737
End purge time: 0800
Total gallons removed: 9.5

APPENDI D

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Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-B1 Date: March 4, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-B1 030419 QA/QC Collected? -

Purging / Sampling Method: Low flow peri-pump HDPE tubing

1. L = Well Depth:	34.54	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	26.67	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1004	1009	1014	1019	1024	1029	1034
Water Level (0.33)	feet	26.70	26.67	26.68	26.67	26.66	26.67	26.68
Volume Purged	gal	0.00	0.15	0.30	0.50	0.75	1.00	1.25
Flow Rate	mL/min	200	200	200	200	200	200	200
Turbidity (+/- 10%)	NTU	55.5	39.4	36.6	30.1	27.6	26.1	25.2
Dissolved Oxygen (+/- 10%)	%	138.8	114.2	118.8	118.5	117.8	116.5	114.5
Dissolved Oxygen (+/- 10%)	mg/L	15.30	12.55	12.97	12.94	12.84	12.67	12.55
Eh / ORP (+/- 10)	MeV	42.8	58.1	60.2	61.0	60.0	60.3	59.4
Specific Conductivity (+/- 3%)	mS/cm^c	0.092	0.089	0.090	0.091	0.092	0.092	0.089
Conductivity (+/- 3%)	mS/cm	-	-	-	-	-	-	-
pH (+/- 0.1)	pH unit	8.03	6.77	6.38	6.37	6.30	6.28	6.27
Temp (+/- 0.5)	C°	10.86	11.13	11.35	11.40	11.52	11.58	11.28
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Sample Time @ 1040

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-162 Date: March 4, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-162 030419 QA/QC Collected? DUP

Purging / Sampling Method: Low flow peri-pump HDPE tubing

1. L = Well Depth:	33.06	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	22.16	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1107	1112	1117	1122	1127	1132	1137
Water Level (0.33)	feet	22.16	22.16	22.19	22.19	22.18	22.18	22.18
Volume Purged	gal	0.00	0.20	0.35	0.75	1.51	2.25	3.00
Flow Rate	mL/min	200	200	200	200	200	200	200
Turbidity (+/- 10%)	NTU	52.0	45.0	34.8	28.0	27.0	16.0	12.5
Dissolved Oxygen (+/- 10%)	%	87.3	86.0	86.4	86.2	84.8	85.0	85.1
Dissolved Oxygen (+/- 10%)	mg/L	9.18	8.90	8.92	8.87	8.72	8.74	8.72
Eh / ORP (+/- 10)	MeV	21.5	16.6	35.5	44.4	49.6	52.2	54.3
Specific Conductivity (+/- 3%)	mS/cm^c	0.225	0.231	0.232	0.233	0.233	0.235	0.231
Conductivity (+/- 3%)	mS/cm	-	-	-	-	-	-	-
pH (+/- 0.1)	pH unit	5.97	6.00	6.00	5.99	5.97	5.96	5.93
Temp (+/- 0.5)	C°	13.06	13.69	13.95	14.05	14.13	14.11	14.12
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Sample Time @ 1150

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-162 Date: March 4, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-162 030419 QA/QC Collected? DUP

Purging / Sampling Method: Low flow peri-pump HDPE tubing

1. L = Well Depth:	33.06	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	22.16	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Para eter	Units	Rea in s						
Time	24 hr	1142	1147					
Water Level (0.33)	feet	22.18	22.18					
Volume Purged	gal	3.51	4.00					
Flow Rate	mL/min	200	200					
Turbidity (+/- 10%)	NTU	7.81	4.94					
Dissolved Oxygen (+/- 10%)	%	84.5	84.1					
Dissolved Oxygen (+/- 10%)	mg/L	8.63	8.61					
Eh / ORP (+/- 10)	MeV	56.5	57.3					
Specific Conductivity (+/- 3%)	mS/cm[c]	0.234	0.235					
Conductivity (+/- 3%)	mS/cm	-	-					
pH (+/- 0.1)	pH unit	5.90	5.90					
Temp (+/- 0.5)	C°	14.13	14.21					
Color	Visual	Clear	Clear					
Odor	Olfactory	None	None					

Comments:

Sample Time @ 1150

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-1 Date: March 4, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-1 030419 QA/QC Collected? -

Purging / Sampling Method: Low flow peri-pump HDPE tubing

1. L = Well Depth:	38.81	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	29.01	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1310	1315	1320	1325	1330	1335	1340
Water Level (0.33)	feet	28.99	29.00	29.00	29.00	29.00	29.00	28.99
Volume Purged	gal	0.00	0.20	0.57	0.75	1.12	1.65	1.91
Flow Rate	mL/min	200	200	200	200	200	200	200
Turbidity (+/- 10%)	NTU	30.1	9.57	7.42	7.95	8.30	8.31	7.01
Dissolved Oxygen (+/- 10%)	%	109.2	103.7	100.0	98.1	93.5	87.5	87.0
Dissolved Oxygen (+/- 10%)	mg/L	11.43	10.91	10.47	10.28	9.78	9.13	9.18
Eh / ORP (+/- 10)	MeV	71.5	78.1	80.9	82.8	81.0	75.5	71.9
Specific Conductivity (+/- 3%)	mS/cm^c	0.134	0.133	0.133	0.132	0.130	0.129	0.130
Conductivity (+/- 3%)	mS/cm	-	-	-	-	-	-	-
pH (+/- 0.1)	pH unit	5.80	5.33	5.13	5.18	5.35	5.59	5.62
Temp (+/- 0.5)	C°	13.19	13.04	13.20	13.36	13.36	13.46	13.05
Color	Visual	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Odor	Olfactory	None	None	None	None	None	None	None

Comments:

Sample Time @ 1355

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-1 Date: March 4, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-1 030419 QA/QC Collected? -

Purging / Sampling Method: Low flow peri-pump HDPE tubing

1. L = Well Depth:	38.81	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	29.01	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$		gal
6. 3(V) = Target Purge Volume		gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1345						
Water Level (0.33)	feet	29.00						
Volume Purged	gal	2.51						
Flow Rate	mL/min	200						
Turbidity (+/- 10%)	NTU	7.22						
Dissolved Oxygen (+/- 10%)	%	85.8						
Dissolved Oxygen (+/- 10%)	mg/L	9.05						
Eh / ORP (+/- 10)	MeV	74.5						
Specific Conductivity (+/- 3%)	mS/cm[c]	0.130						
Conductivity (+/- 3%)	mS/cm	-						
pH (+/- 0.1)	pH unit	5.58						
Temp (+/- 0.5)	C°	12.63						
Color	Visual	Clear						
Odor	Olfactory	None						

Comments:

Sample Time @ 1355

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19A Date: March 5, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-19A 030519 QA/QC Collected? -

Purging / Sampling Method: Bailing - 3 well volumes

1. L = Well Depth:	42.05	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	32.67	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.53	gal
6. 3(V) = Target Purge Volume	4.59	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1046	1050	1054	1058			
Water Level (0.33)	feet	32.67	32.64	32.66	32.67			
Volume Purged	gal	0.00	1.53	3.06	4.59			
Flow Rate	mL/min	-	-	-	-			
Turbidity (+/- 10%)	NTU	26.7	>1100	>1100	>1100			
Dissolved Oxygen (+/- 10%)	%	136.8	112.5	110.5	110.5			
Dissolved Oxygen (+/- 10%)	mg/L	14.86	12.08	11.86	12.12			
Eh / ORP (+/- 10)	MeV	70.9	75.7	82.3	84.5			
Specific Conductivity (+/- 3%)	mS/cm^c	0.276	0.275	0.286	0.246			
Conductivity (+/- 3%)	mS/cm	-	-	-	-			
pH (+/- 0.1)	pH unit	6.39	6.29	6.29	6.26			
Temp (+/- 0.5)	C°	11.03	12.16	12.16	12.10			
Color	Visual	Clear	Brown	Brown	Brown			
Odor	Olfactory	None	None	None	None			

Comments:

Sample Time @ 1100

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19A2 Date: March 5, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-19A2 030519 QA/QC Collected? -

Purging / Sampling Method: Bailing - 3 well volumes

1. L = Well Depth:	46.43	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	33.88	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	2.05	gal
6. 3(V) = Target Purge Volume	6.15	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1157	1202	1207	1212			
Water Level (0.33)	feet	33.88	33.89	33.89	33.90			
Volume Purged	gal	0.00	2.05	4.10	6.15			
Flow Rate	mL/min	-	-	-	-			
Turbidity (+/- 10%)	NTU	146.0	>1100	>1100	>1100			
Dissolved Oxygen (+/- 10%)	%	144.60	110.40	104.80	106.30			
Dissolved Oxygen (+/- 10%)	mg/L	15.36	11.97	11.40	11.50			
Eh / ORP (+/- 10)	MeV	101.4	115.2	106.2	105.1			
Specific Conductivity (+/- 3%)	mS/cm^c	0.278	0.278	0.278	0.27			
Conductivity (+/- 3%)	mS/cm	-	-	-	-			
pH (+/- 0.1)	pH unit	6.01	5.65	5.43	5.48			
Temp (+/- 0.5)	C°	12.35	12.31	11.49	11.78			
Color	Visual	Clear	Brown	Brown	Brown			
Odor	Olfactory	None	None	None	None			

Comments:

Sample Time @ 1215

Monitoring Well Purging / Sampling Form

Project Name and Number: East Hampton Airport, 60566160

Monitoring Well Number: EH-19B Date: March 5, 2019

Samplers: Greg Dunlavey and Alexandra Golden

Sample Number: EH-19B 030519 QA/QC Collected? MS/MSD

Purging / Sampling Method: Bailing - 3 well volumes

1. L = Well Depth:	41.08	feet
2. D = Riser Diameter (I.D.):		feet
3. W = Depth to Water:	32.42	feet
4. C = Column of Water in Well:		feet
5. V = Volume of Water in Well = $C(3.14159)(0.5D)^2(7.48)$	1.41	gal
6. 3(V) = Target Purge Volume	4.23	gal

D (inches)	D (feet)
1-inch	0.08
2-inch	0.17
3-inch	0.25
4-inch	0.33
6-inch	0.50

Conversion factors to determine V given C

D (inches)	1-inch	2-inch	3-inch	4-inch	6-inch
V (gal / ft)	0.041	0.163	0.37	0.65	1.5

Water Quality Readings Collected Using YSI 556 and HACH 2100 Turbidimeter

Parameter	Units	Readings						
Time	24 hr	1320	1324	1328	1332			
Water Level (0.33)	feet	32.42	32.44	32.44	32.45			
Volume Purged	gal	0.00	1.41	2.82	4.23			
Flow Rate	mL/min	-	-	-	-			
Turbidity (+/- 10%)	NTU	169.0	>1100	>1100	>1100			
Dissolved Oxygen (+/- 10%)	%	97.70	95.20	99.60	110.10			
Dissolved Oxygen (+/- 10%)	mg/L	10.45	10.29	10.75	11.95			
Eh / ORP (+/- 10)	MeV	112.8	138.2	138.2	116.8			
Specific Conductivity (+/- 3%)	mS/cm^c	0.109	0.143	0.135	0.147			
Conductivity (+/- 3%)	mS/cm	-	-	-	-			
pH (+/- 0.1)	pH unit	5.63	5.17	4.96	5.53			
Temp (+/- 0.5)	C°	12.30	11.86	11.97	11.92			
Color	Visual	Clear	Brown	Brown	Brown			
Odor	Olfactory	None	None	None	None			

Comments:

Sample Time @ 1340

APPENDI E

Laborator Re orts an Data Usabi it S ar Re orts

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

January 30, 2019

Analytical Report for Service Request No: K1812302

Lindsay Mitchell
AECOM
40 British American Blvd
Latham, NY 12210

RE: E. Hampton Airport / 60566160

Dear Lindsay,

Enclosed are the results of the sample(s) submitted to our laboratory December 15, 2018
For your reference, these analyses have been assigned our service request number **K1812302.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the 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

Chris Leaf
Project Manager

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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.pjlabs.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/bsdw/labservice.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/anlayte 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: AECOM
Project: E. Hampton Airport
Sample Matrix: Soil, Water

Service Request: K1812302
Date Received: 12/15/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Two soil samples and two water samples were received for analysis at ALS Environmental on 12/15/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Organic LC:

Method PFC/537M, 12/21/2018: The upper control criterion was exceeded for D3-MeFOSAA and/or D5-EtFOSAA in samples IDW(soil 1) 121418 and IDW(soil 2) 121418. The associated target analytes were not detected in the samples. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Method PFC/537M, 12/21/2018: Sample IDW(water) 121418 required dilution due to the presence of elevated levels of target analytes. The reporting limits are adjusted to reflect the dilution.

Method PFC/537M, 12/21/2018: The upper control criterion was exceeded for D5-EtFOSAA in Method Blank KQ1818316-06. No target analytes were detected in the Method Blank. Since the apparent problem equates to a high bias, the data quality was not significantly affected. No further corrective action was appropriate.

Method PFC/537M, 12/21/2018: The control criteria were exceeded forD3-MeFOSAA D5-EtFOSAA in IDW(soil 2) 121418 MS KQ1818316-01, IDW(soil 2) 121418 DMS KQ1818316-02, and LCS KQ1818316-05. 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.

The control criteria were exceeded for D3-MeFOSAA, D5-EtFOSAA, 13C2-6:2 FTS, and 13C2-8:2 FTS in Continuing Calibration Verifications (CCV) KQ1818586-01. The recoveries of the associated native analytes were within control criteria, which indicated the analysis was in control. No further corrective action was appropriate.

Approved by  Date 01/30/2019

Chain of Custody

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

95684

CHAIN OF CUSTODY

95684

001, 003

SR# K1842302

COC Set 1 of 1

COC#

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Project Name: E. Hampton Airport	Project Number: 60566160
Project Manager: Lindsay Mitchell	
Company: AECOM	
Address: 40 British American Blvd, Latham, NY 12110	
Phone #: 518-384-4212	email: Lindsay.Mitchell@aecom.com
Sampler Signature: Greg Dunlavey	Sampler Printed Name: Greg Dunlavey

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	14D PFC/537M / PFOA	1	2	3	4	5	Remarks
1. IDW (Soil 1) 121418		12/14/18	0850	S	1	X						Composite
2. IDW (Soil 2) 121418		12/14/18	0900	S	1	X						Composite
3. IDW (water) 121418		12/14/18	0915	W	2	X						Composite
4. Terminal 121418		12/14/18	0945	W	2	X						Grab
5. Temp. Blank		—		—	1							
6.												
7.												
8.												
9.												

Report Requirements

___ I. Routine Report: Method Blank, Surrogate, as required

X II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

Invoice Information

P.O.#

Bill To:

Turnaround Requirements

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

Results to: Lindsay.Mitchell@aecom.com

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: Greg Dunlavey	Signature: DAVID PLUNTON	Signature	Signature	Signature	Signature
Printed Name: Greg Dunlavey	Printed Name: ALS-K	Printed Name	Printed Name	Printed Name	Printed Name
Firm: AECOM	Firm: 12-15-18 1000	Firm	Firm	Firm	Firm
Date/Time: 12/14/18 - 1500	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

PC 244

Cooler Receipt and Preservation Form

Client AECOM Service Request K18 12302

Received: 12-15-18 Opened: 12-15-18 By: ASP Unloaded: 12-15-18 By: ASP

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 Top 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 NA	Tracking Number NA	Filed
2.1	2.0	2.0	1.9	-0.1	391	95684	7844 2907 8764	

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: _____

Total Solids

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18
Sample Matrix:	Soil	**Date Received:**	12/15/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
IDW(soil 1) 121418	K1812302-001	**96.4**	-	-	1	12/17/18 16:22	
IDW(soil 2) 121418	K1812302-002	**95.2**	-	-	1	12/17/18 16:22	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	AECOM	**Service Request:**	K1812302
Project	E. Hampton Airport/60566160	**Date Collected:**	12/14/18
Sample Matrix:	Soil	**Date Received:**	12/15/18
		Date Analyzed:	12/17/18

Replicate Sample Summary

Inorganic Parameters

Sample Name:	IDW(soil 2) 121418	**Units:**	Percent
Lab Code:	K1812302-002	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1812302-002DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	95.2	96.3	95.8	1	20

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.

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 10:00
Sample Name:	IDW(soil 1) 121418	**Units:**	ng/g
Lab Code:	K1812302-001	**Basis:**	Dry

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	0.22	U	0.96	0.22	1	12/21/18 03:40	12/17/18	
Perfluorohexane sulfonic acid (PFHxS)	0.30	U	0.96	0.30	1	12/21/18 03:40	12/17/18	
Perfluoroheptane sulfonic acid (PFHpS)	0.062	U	0.96	0.062	1	12/21/18 03:40	12/17/18	
Perfluorooctane sulfonic acid (PFOS)	0.13	U	0.96	0.13	1	12/21/18 03:40	12/17/18	
Perfluorodecane sulfonic acid (PFDS)	0.17	U	0.96	0.17	1	12/21/18 03:40	12/17/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	0.39	U	0.96	0.39	1	12/21/18 03:40	12/17/18	
Perfluoropentanoic acid (PFPeA)	0.21	U	0.96	0.21	1	12/21/18 03:40	12/17/18	
Perfluorohexanoic acid (PFHxA)	0.31	U	0.96	0.31	1	12/21/18 03:40	12/17/18	
Perfluoroheptanoic acid (PFHpA)	0.19	U	0.96	0.19	1	12/21/18 03:40	12/17/18	
Perfluorooctanoic acid (PFOA)	0.13	U	0.96	0.13	1	12/21/18 03:40	12/17/18	
Perfluorononanoic acid (PFNA)	0.33	U	0.96	0.33	1	12/21/18 03:40	12/17/18	
Perfluorodecanoic acid (PFDA)	0.26	U	0.96	0.26	1	12/21/18 03:40	12/17/18	
Perfluoroundecanoic acid (PFUnDA)	0.18	U	0.96	0.18	1	12/21/18 03:40	12/17/18	
Perfluorododecanoic acid (PFDoDA)	0.27	U	0.96	0.27	1	12/21/18 03:40	12/17/18	
Perfluorotridecanoic acid (PFTrDA)	0.21	U	0.96	0.21	1	12/21/18 03:40	12/17/18	
Perfluorotetradecanoic acid (PFTeDA)	0.18	U	0.96	0.18	1	12/21/18 03:40	12/17/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.067	U	0.96	0.067	1	12/21/18 03:40	12/17/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	0.27	U	0.96	0.27	1	12/21/18 03:40	12/17/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.20	U	0.96	0.20	1	12/21/18 03:40	12/17/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.15	U	0.96	0.15	1	12/21/18 03:40	12/17/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.029	U	0.96	0.029	1	12/21/18 03:40	12/17/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 10:00
Sample Name:	IDW(soil 1) 121418	**Units:**	ng/g
Lab Code:	K1812302-001	**Basis:**	Dry

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Prep Method: EPA 3550B

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	81	33 - 109	12/21/18 03:40	
18O2-PFHxS	87	36 - 120	12/21/18 03:40	
13C4-PFOS	87	32 - 130	12/21/18 03:40	
13C4-PFBA	89	34 - 116	12/21/18 03:40	
13C5-PFPeA	107	39 - 133	12/21/18 03:40	
13C2-PFHxA	96	32 - 136	12/21/18 03:40	
13C4-PFHpA	95	36 - 133	12/21/18 03:40	
13C4-PFOA	85	31 - 134	12/21/18 03:40	
13C5-PFNA	85	27 - 133	12/21/18 03:40	
13C2-PFDA	87	30 - 137	12/21/18 03:40	
13C2-PFUnDA	90	32 - 146	12/21/18 03:40	
13C2-PFDoDA	91	36 - 136	12/21/18 03:40	
13C2-PFTeDA	114	39 - 138	12/21/18 03:40	
13C8-FOSA	98	40 - 132	12/21/18 03:40	
D3-MeFOSAA	159	20 - 154	12/21/18 03:40	*
D5-EtFOSAA	162	29 - 153	12/21/18 03:40	*
13C2-6:2 FTS	54	30 - 140	12/21/18 03:40	
13C2-8:2 FTS	59	9 - 171	12/21/18 03:40	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 10:00
Sample Name:	IDW(soil 2) 121418	**Units:**	ng/g
Lab Code:	K1812302-002	**Basis:**	Dry

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	0.22	U	0.91	0.22	1	12/21/18 03:50	12/17/18	
Perfluorohexane sulfonic acid (PFHxS)	0.30	U	0.91	0.30	1	12/21/18 03:50	12/17/18	
Perfluoroheptane sulfonic acid (PFHpS)	0.062	U	0.91	0.062	1	12/21/18 03:50	12/17/18	
Perfluorooctane sulfonic acid (PFOS)	0.13	U	0.91	0.13	1	12/21/18 03:50	12/17/18	
Perfluorodecane sulfonic acid (PFDS)	0.17	U	0.91	0.17	1	12/21/18 03:50	12/17/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	0.39	U	0.91	0.39	1	12/21/18 03:50	12/17/18	
Perfluoropentanoic acid (PFPeA)	0.21	U	0.91	0.21	1	12/21/18 03:50	12/17/18	
Perfluorohexanoic acid (PFHxA)	0.31	U	0.91	0.31	1	12/21/18 03:50	12/17/18	
Perfluoroheptanoic acid (PFHpA)	0.19	U	0.91	0.19	1	12/21/18 03:50	12/17/18	
Perfluorooctanoic acid (PFOA)	0.13	U	0.91	0.13	1	12/21/18 03:50	12/17/18	
Perfluorononanoic acid (PFNA)	0.33	U	0.91	0.33	1	12/21/18 03:50	12/17/18	
Perfluorodecanoic acid (PFDA)	0.26	U	0.91	0.26	1	12/21/18 03:50	12/17/18	
Perfluoroundecanoic acid (PFUnDA)	0.18	U	0.91	0.18	1	12/21/18 03:50	12/17/18	
Perfluorododecanoic acid (PFDoDA)	0.27	U	0.91	0.27	1	12/21/18 03:50	12/17/18	
Perfluorotridecanoic acid (PFTrDA)	0.21	U	0.91	0.21	1	12/21/18 03:50	12/17/18	
Perfluorotetradecanoic acid (PFTeDA)	0.18	U	0.91	0.18	1	12/21/18 03:50	12/17/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.067	U	0.91	0.067	1	12/21/18 03:50	12/17/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	0.27	U	0.91	0.27	1	12/21/18 03:50	12/17/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.20	U	0.91	0.20	1	12/21/18 03:50	12/17/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.15	U	0.91	0.15	1	12/21/18 03:50	12/17/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.029	U	0.91	0.029	1	12/21/18 03:50	12/17/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 10:00
Sample Name:	IDW(soil 2) 121418	**Units:**	ng/g
Lab Code:	K1812302-002	**Basis:**	Dry

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Prep Method: EPA 3550B

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	79	33 - 109	12/21/18 03:50	
18O2-PFHxS	89	36 - 120	12/21/18 03:50	
13C4-PFOS	87	32 - 130	12/21/18 03:50	
13C4-PFBA	90	34 - 116	12/21/18 03:50	
13C5-PFPeA	104	39 - 133	12/21/18 03:50	
13C2-PFHxA	94	32 - 136	12/21/18 03:50	
13C4-PFHpA	96	36 - 133	12/21/18 03:50	
13C4-PFOA	84	31 - 134	12/21/18 03:50	
13C5-PFNA	83	27 - 133	12/21/18 03:50	
13C2-PFDA	89	30 - 137	12/21/18 03:50	
13C2-PFUnDA	88	32 - 146	12/21/18 03:50	
13C2-PFDoDA	90	36 - 136	12/21/18 03:50	
13C2-PFTeDA	111	39 - 138	12/21/18 03:50	
13C8-FOSA	99	40 - 132	12/21/18 03:50	
D3-MeFOSAA	152	20 - 154	12/21/18 03:50	
D5-EtFOSAA	159	29 - 153	12/21/18 03:50	*
13C2-6:2 FTS	51	30 - 140	12/21/18 03:50	
13C2-8:2 FTS	54	9 - 171	12/21/18 03:50	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 10:00
Sample Name:	IDW(water) 121418	**Units:**	ng/L
Lab Code:	K1812302-003	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**200**		4.2	0.28	1	01/05/19 13:29	12/27/18	
Perfluorohexane sulfonic acid (PFHxS)	**610**		21	6.5	5	01/25/19 21:07	12/27/18	
Perfluoroheptane sulfonic acid (PFHpS)	**34**		4.2	0.44	1	01/05/19 13:29	12/27/18	
Perfluorooctane sulfonic acid (PFOS)	**150**		1.7	0.44	1	01/05/19 13:29	12/27/18	
Perfluorodecane sulfonic acid (PFDS)	0.30	U	4.2	0.30	1	01/05/19 13:29	12/27/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	**180**		4.2	0.40	1	01/05/19 13:29	12/27/18	
Perfluoropentanoic acid (PFPeA)	**490**		21	8.5	5	01/25/19 21:07	12/27/18	
Perfluorohexanoic acid (PFHxA)	**510**		46	44	5	01/25/19 21:07	12/27/18	
Perfluoroheptanoic acid (PFHpA)	**300**		4.2	0.63	1	01/05/19 13:29	12/27/18	
Perfluorooctanoic acid (PFOA)	**130**		1.7	0.35	1	01/05/19 13:29	12/27/18	
Perfluorononanoic acid (PFNA)	**27**		4.2	1.1	1	01/05/19 13:29	12/27/18	
Perfluorodecanoic acid (PFDA)	**1.3**	**J**	4.2	1.2	1	01/05/19 13:29	12/27/18	
Perfluoroundecanoic acid (PFUnDA)	1.5	U	4.2	1.5	1	01/05/19 13:29	12/27/18	
Perfluorododecanoic acid (PFDoDA)	1.3	U	4.2	1.3	1	01/05/19 13:29	12/27/18	
Perfluorotridecanoic acid (PFTrDA)	1.3	U	4.2	1.3	1	01/05/19 13:29	12/27/18	
Perfluorotetradecanoic acid (PFTeDA)	2.0	U	4.2	2.0	1	01/05/19 13:29	12/27/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.52	U	4.2	0.52	1	01/05/19 13:29	12/27/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4	U	4.2	1.4	1	01/05/19 13:29	12/27/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50	U	4.2	0.50	1	01/05/19 13:29	12/27/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**100**		4.2	0.55	1	01/05/19 13:29	12/27/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**14**		4.2	0.15	1	01/05/19 13:29	12/27/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 10:00
Sample Name:	IDW(water) 121418	**Units:**	ng/L
Lab Code:	K1812302-003	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	78	20 - 109	01/05/19 13:29	
18O2-PFHxS	99	26 - 122	01/25/19 21:07	
13C4-PFOS	79	25 - 121	01/05/19 13:29	
13C4-PFBA	89	27 - 124	01/05/19 13:29	
13C5-PFPeA	92	27 - 138	01/25/19 21:07	
13C2-PFHxA	87	28 - 132	01/25/19 21:07	
13C4-PFHpA	75	19 - 139	01/05/19 13:29	
13C4-PFOA	83	22 - 130	01/05/19 13:29	
13C5-PFNA	88	20 - 127	01/05/19 13:29	
13C2-PFDA	82	24 - 125	01/05/19 13:29	
13C2-PFUnDA	75	22 - 125	01/05/19 13:29	
13C2-PFDoDA	78	19 - 122	01/05/19 13:29	
13C2-PFTeDA	81	13 - 124	01/05/19 13:29	
13C8-FOSA	69	18 - 109	01/05/19 13:29	
D3-MeFOSAA	64	9 - 123	01/05/19 13:29	
D5-EtFOSAA	65	12 - 126	01/05/19 13:29	
13C2-6:2 FTS	97	10 - 226	01/05/19 13:29	
13C2-8:2 FTS	83	10 - 202	01/05/19 13:29	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 09:45
Sample Matrix:	Water	**Date Received:**	12/15/18 10:00
Sample Name:	Terminal 121418	**Units:**	ng/L
Lab Code:	K1812302-004	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28	U	4.1	0.28	1	01/05/19 13:40	12/27/18	
Perfluorohexane sulfonic acid (PFHxS)	1.3	U	4.1	1.3	1	01/05/19 13:40	12/27/18	
Perfluoroheptane sulfonic acid (PFHpS)	0.44	U	4.1	0.44	1	01/05/19 13:40	12/27/18	
Perfluorooctane sulfonic acid (PFOS)	0.44	U	1.6	0.44	1	01/05/19 13:40	12/27/18	
Perfluorodecane sulfonic acid (PFDS)	0.30	U	4.1	0.30	1	01/05/19 13:40	12/27/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	0.40	U	4.1	0.40	1	01/05/19 13:40	12/27/18	
Perfluoropentanoic acid (PFPeA)	1.7	U	4.1	1.7	1	01/05/19 13:40	12/27/18	
Perfluorohexanoic acid (PFHxA)	8.8	U	9.2	8.8	1	01/05/19 13:40	12/27/18	
Perfluoroheptanoic acid (PFHpA)	0.63	U	4.1	0.63	1	01/05/19 13:40	12/27/18	
Perfluorooctanoic acid (PFOA)	**0.64**	**J**	1.6	0.35	1	01/05/19 13:40	12/27/18	
Perfluorononanoic acid (PFNA)	1.1	U	4.1	1.1	1	01/05/19 13:40	12/27/18	
Perfluorodecanoic acid (PFDA)	1.2	U	4.1	1.2	1	01/05/19 13:40	12/27/18	
Perfluoroundecanoic acid (PFUnDA)	1.5	U	4.1	1.5	1	01/05/19 13:40	12/27/18	
Perfluorododecanoic acid (PFDoDA)	1.3	U	4.1	1.3	1	01/05/19 13:40	12/27/18	
Perfluorotridecanoic acid (PFTrDA)	1.3	U	4.1	1.3	1	01/05/19 13:40	12/27/18	
Perfluorotetradecanoic acid (PFTeDA)	2.0	U	4.1	2.0	1	01/05/19 13:40	12/27/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	**2.1**	**J**	4.1	0.52	1	01/05/19 13:40	12/27/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4	U	4.1	1.4	1	01/05/19 13:40	12/27/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50	U	4.1	0.50	1	01/05/19 13:40	12/27/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55	U	4.1	0.55	1	01/05/19 13:40	12/27/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15	U	4.1	0.15	1	01/05/19 13:40	12/27/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18 09:45
Sample Matrix:	Water	**Date Received:**	12/15/18 10:00
Sample Name:	Terminal 121418	**Units:**	ng/L
Lab Code:	K1812302-004	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	78	20 - 109	01/05/19 13:40	
18O2-PFHxS	81	26 - 122	01/05/19 13:40	
13C4-PFOS	85	25 - 121	01/05/19 13:40	
13C4-PFBA	92	27 - 124	01/05/19 13:40	
13C5-PFPeA	103	27 - 138	01/05/19 13:40	
13C2-PFHxA	98	28 - 132	01/05/19 13:40	
13C4-PFHpA	83	19 - 139	01/05/19 13:40	
13C4-PFOA	83	22 - 130	01/05/19 13:40	
13C5-PFNA	89	20 - 127	01/05/19 13:40	
13C2-PFDA	94	24 - 125	01/05/19 13:40	
13C2-PFUnDA	77	22 - 125	01/05/19 13:40	
13C2-PFDoDA	76	19 - 122	01/05/19 13:40	
13C2-PFTeDA	81	13 - 124	01/05/19 13:40	
13C8-FOSA	38	18 - 109	01/05/19 13:40	
D3-MeFOSAA	79	9 - 123	01/05/19 13:40	
D5-EtFOSAA	83	12 - 126	01/05/19 13:40	
13C2-6:2 FTS	72	10 - 226	01/05/19 13:40	
13C2-8:2 FTS	81	10 - 202	01/05/19 13:40	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/g
Lab Code:	KQ1818316-06	**Basis:**	Dry

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Prep Method: EPA 3550B

Analyte Name	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	0.22	U	1.0	0.22	1	12/21/18 03:19	12/17/18	
Perfluorohexane sulfonic acid (PFHxS)	0.30	U	1.0	0.30	1	12/21/18 03:19	12/17/18	
Perfluoroheptane sulfonic acid (PFHpS)	0.062	U	1.0	0.062	1	12/21/18 03:19	12/17/18	
Perfluorooctane sulfonic acid (PFOS)	0.13	U	1.0	0.13	1	12/21/18 03:19	12/17/18	
Perfluorodecane sulfonic acid (PFDS)	0.17	U	1.0	0.17	1	12/21/18 03:19	12/17/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	0.39	U	1.0	0.39	1	12/21/18 03:19	12/17/18	
Perfluoropentanoic acid (PFPeA)	0.21	U	1.0	0.21	1	12/21/18 03:19	12/17/18	
Perfluorohexanoic acid (PFHxA)	0.31	U	1.0	0.31	1	12/21/18 03:19	12/17/18	
Perfluoroheptanoic acid (PFHpA)	0.19	U	1.0	0.19	1	12/21/18 03:19	12/17/18	
Perfluorooctanoic acid (PFOA)	0.13	U	1.0	0.13	1	12/21/18 03:19	12/17/18	
Perfluorononanoic acid (PFNA)	0.33	U	1.0	0.33	1	12/21/18 03:19	12/17/18	
Perfluorodecanoic acid (PFDA)	0.26	U	1.0	0.26	1	12/21/18 03:19	12/17/18	
Perfluoroundecanoic acid (PFUnDA)	0.18	U	1.0	0.18	1	12/21/18 03:19	12/17/18	
Perfluorododecanoic acid (PFDoDA)	0.27	U	1.0	0.27	1	12/21/18 03:19	12/17/18	
Perfluorotridecanoic acid (PFTrDA)	0.21	U	1.0	0.21	1	12/21/18 03:19	12/17/18	
Perfluorotetradecanoic acid (PFTeDA)	0.18	U	1.0	0.18	1	12/21/18 03:19	12/17/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.067	U	1.0	0.067	1	12/21/18 03:19	12/17/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	0.27	U	1.0	0.27	1	12/21/18 03:19	12/17/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.20	U	1.0	0.20	1	12/21/18 03:19	12/17/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.15	U	1.0	0.15	1	12/21/18 03:19	12/17/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.029	U	1.0	0.029	1	12/21/18 03:19	12/17/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/g
Lab Code:	KQ1818316-06	**Basis:**	Dry

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Prep Method: EPA 3550B

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	87	33 - 109	12/21/18 03:19	
18O2-PFHxS	75	36 - 120	12/21/18 03:19	
13C4-PFOS	78	32 - 130	12/21/18 03:19	
13C4-PFBA	90	34 - 116	12/21/18 03:19	
13C5-PFPeA	108	39 - 133	12/21/18 03:19	
13C2-PFHxA	98	32 - 136	12/21/18 03:19	
13C4-PFHpA	84	36 - 133	12/21/18 03:19	
13C4-PFOA	85	31 - 134	12/21/18 03:19	
13C5-PFNA	87	27 - 133	12/21/18 03:19	
13C2-PFDA	81	30 - 137	12/21/18 03:19	
13C2-PFUnDA	91	32 - 146	12/21/18 03:19	
13C2-PFDoDA	89	36 - 136	12/21/18 03:19	
13C2-PFTeDA	105	39 - 138	12/21/18 03:19	
13C8-FOSA	103	40 - 132	12/21/18 03:19	
D3-MeFOSAA	151	20 - 154	12/21/18 03:19	
D5-EtFOSAA	156	29 - 153	12/21/18 03:19	*
13C2-6:2 FTS	51	30 - 140	12/21/18 03:19	
13C2-8:2 FTS	51	9 - 171	12/21/18 03:19	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1818747-04	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28	U	5.0	0.28	1	01/05/19 11:24	12/27/18	
Perfluorohexane sulfonic acid (PFHxS)	1.3	U	5.0	1.3	1	01/05/19 11:24	12/27/18	
Perfluoroheptane sulfonic acid (PFHpS)	0.44	U	5.0	0.44	1	01/05/19 11:24	12/27/18	
Perfluorooctane sulfonic acid (PFOS)	0.44	U	2.0	0.44	1	01/05/19 11:24	12/27/18	
Perfluorodecane sulfonic acid (PFDS)	0.30	U	5.0	0.30	1	01/05/19 11:24	12/27/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	0.40	U	5.0	0.40	1	01/05/19 11:24	12/27/18	
Perfluoropentanoic acid (PFPeA)	1.7	U	5.0	1.7	1	01/05/19 11:24	12/27/18	
Perfluorohexanoic acid (PFHxA)	8.8	U	10	8.8	1	01/05/19 11:24	12/27/18	
Perfluoroheptanoic acid (PFHpA)	0.63	U	5.0	0.63	1	01/05/19 11:24	12/27/18	
Perfluorooctanoic acid (PFOA)	**0.41**	**J**	2.0	0.35	1	01/05/19 11:24	12/27/18	
Perfluorononanoic acid (PFNA)	1.1	U	5.0	1.1	1	01/05/19 11:24	12/27/18	
Perfluorodecanoic acid (PFDA)	1.2	U	5.0	1.2	1	01/05/19 11:24	12/27/18	
Perfluoroundecanoic acid (PFUnDA)	1.5	U	5.0	1.5	1	01/05/19 11:24	12/27/18	
Perfluorododecanoic acid (PFDoDA)	1.3	U	5.0	1.3	1	01/05/19 11:24	12/27/18	
Perfluorotridecanoic acid (PFTrDA)	1.3	U	5.0	1.3	1	01/05/19 11:24	12/27/18	
Perfluorotetradecanoic acid (PFTeDA)	2.0	U	5.0	2.0	1	01/05/19 11:24	12/27/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.52	U	5.0	0.52	1	01/05/19 11:24	12/27/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4	U	5.0	1.4	1	01/05/19 11:24	12/27/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50	U	5.0	0.50	1	01/05/19 11:24	12/27/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55	U	5.0	0.55	1	01/05/19 11:24	12/27/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15	U	5.0	0.15	1	01/05/19 11:24	12/27/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1818747-04	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	83	20 - 109	01/05/19 11:24	
18O2-PFHxS	86	26 - 122	01/05/19 11:24	
13C4-PFOS	93	25 - 121	01/05/19 11:24	
13C4-PFBA	85	27 - 124	01/05/19 11:24	
13C5-PFPeA	98	27 - 138	01/05/19 11:24	
13C2-PFHxA	89	28 - 132	01/05/19 11:24	
13C4-PFHpA	90	19 - 139	01/05/19 11:24	
13C4-PFOA	83	22 - 130	01/05/19 11:24	
13C5-PFNA	89	20 - 127	01/05/19 11:24	
13C2-PFDA	89	24 - 125	01/05/19 11:24	
13C2-PFUnDA	85	22 - 125	01/05/19 11:24	
13C2-PFDoDA	80	19 - 122	01/05/19 11:24	
13C2-PFTeDA	84	13 - 124	01/05/19 11:24	
13C8-FOSA	74	18 - 109	01/05/19 11:24	
D3-MeFOSAA	80	9 - 123	01/05/19 11:24	
D5-EtFOSAA	86	12 - 126	01/05/19 11:24	
13C2-6:2 FTS	68	10 - 226	01/05/19 11:24	
13C2-8:2 FTS	83	10 - 202	01/05/19 11:24	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	ng/L
Lab Code:	R1812115-005	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**3.5**	**J**	4.1	0.28	1	01/05/19 12:37	12/27/18	
Perfluorohexane sulfonic acid (PFHxS)	**5.4**		4.1	1.3	1	01/05/19 12:37	12/27/18	
Perfluoroheptane sulfonic acid (PFHpS)	0.44	U	4.1	0.44	1	01/05/19 12:37	12/27/18	
Perfluorooctane sulfonic acid (PFOS)	**4.6**		1.6	0.44	1	01/05/19 12:37	12/27/18	
Perfluorodecane sulfonic acid (PFDS)	0.30	U	4.1	0.30	1	01/05/19 12:37	12/27/18	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	**27**		4.1	0.40	1	01/05/19 12:37	12/27/18	
Perfluoropentanoic acid (PFPeA)	**12**		4.1	1.7	1	01/05/19 12:37	12/27/18	
Perfluorohexanoic acid (PFHxA)	**21**		9.2	8.8	1	01/05/19 12:37	12/27/18	
Perfluoroheptanoic acid (PFHpA)	**7.0**		4.1	0.63	1	01/05/19 12:37	12/27/18	
Perfluorooctanoic acid (PFOA)	**16**		1.6	0.35	1	01/05/19 12:37	12/27/18	
Perfluorononanoic acid (PFNA)	1.1	U	4.1	1.1	1	01/05/19 12:37	12/27/18	
Perfluorodecanoic acid (PFDA)	1.2	U	4.1	1.2	1	01/05/19 12:37	12/27/18	
Perfluoroundecanoic acid (PFUnDA)	1.5	U	4.1	1.5	1	01/05/19 12:37	12/27/18	
Perfluorododecanoic acid (PFDoDA)	1.3	U	4.1	1.3	1	01/05/19 12:37	12/27/18	
Perfluorotridecanoic acid (PFTrDA)	1.3	U	4.1	1.3	1	01/05/19 12:37	12/27/18	
Perfluorotetradecanoic acid (PFTeDA)	2.0	U	4.1	2.0	1	01/05/19 12:37	12/27/18	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.52	U	4.1	0.52	1	01/05/19 12:37	12/27/18	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4	U	4.1	1.4	1	01/05/19 12:37	12/27/18	
N-Ethyl perfluorooctane sulfonamidoacetic acid	**1.2**	**J**	4.1	0.50	1	01/05/19 12:37	12/27/18	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55	U	4.1	0.55	1	01/05/19 12:37	12/27/18	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15	U	4.1	0.15	1	01/05/19 12:37	12/27/18	

Analytical Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Batch QC	**Units:**	ng/L
Lab Code:	R1812115-005	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	78	20 - 109	01/05/19 12:37	
18O2-PFHxS	98	26 - 122	01/05/19 12:37	
13C4-PFOS	83	25 - 121	01/05/19 12:37	
13C4-PFBA	87	27 - 124	01/05/19 12:37	
13C5-PFPeA	91	27 - 138	01/05/19 12:37	
13C2-PFHxA	98	28 - 132	01/05/19 12:37	
13C4-PFHpA	89	19 - 139	01/05/19 12:37	
13C4-PFOA	81	22 - 130	01/05/19 12:37	
13C5-PFNA	87	20 - 127	01/05/19 12:37	
13C2-PFDA	80	24 - 125	01/05/19 12:37	
13C2-PFUnDA	75	22 - 125	01/05/19 12:37	
13C2-PFDoDA	68	19 - 122	01/05/19 12:37	
13C2-PFTeDA	64	13 - 124	01/05/19 12:37	
13C8-FOSA	71	18 - 109	01/05/19 12:37	
D3-MeFOSAA	65	9 - 123	01/05/19 12:37	
D5-EtFOSAA	70	12 - 126	01/05/19 12:37	
13C2-6:2 FTS	73	10 - 226	01/05/19 12:37	
13C2-8:2 FTS	62	10 - 202	01/05/19 12:37	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	IDW(water) 121418 K1812302-003	Terminal 121418 K1812302-004	Batch QC R1812115-005
13C3-PFBS	20-109	78	78	78
18O2-PFHxS	26-122	99	81	98
13C4-PFOS	25-121	79	85	83
13C4-PFBA	27-124	89	92	87
13C5-PFPeA	27-138	92	103	91
13C2-PFHxA	28-132	87	98	98
13C4-PFHpA	19-139	75	83	89
13C4-PFOA	22-130	83	83	81
13C5-PFNA	20-127	88	89	87
13C2-PFDA	24-125	82	94	80
13C2-PFUnDA	22-125	75	77	75
13C2-PFDoDA	19-122	78	76	68
13C2-PFTeDA	13-124	81	81	64
13C8-FOSA	18-109	69	38	71
D3-MeFOSAA	9-123	64	79	65
D5-EtFOSAA	12-126	65	83	70
13C2-6:2 FTS	10-226	97	72	73
13C2-8:2 FTS	10-202	83	81	62

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

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	Method Blank KQ1818747-04	Lab Control Sample KQ1818747-05	Duplicate Lab Control Sample KQ1818747-06
13C3-PFBS	20-109	83	83	75
18O2-PFHxS	26-122	86	96	96
13C4-PFOS	25-121	93	86	86
13C4-PFBA	27-124	85	86	87
13C5-PFPeA	27-138	98	100	100
13C2-PFHxA	28-132	89	93	96
13C4-PFHpA	19-139	90	97	89
13C4-PFOA	22-130	83	80	80
13C5-PFNA	20-127	89	90	94
13C2-PFDA	24-125	89	91	89
13C2-PFUnDA	22-125	85	79	78
13C2-PFDoDA	19-122	80	72	76
13C2-PFTeDA	13-124	84	80	77
13C8-FOSA	18-109	74	74	76
D3-MeFOSAA	9-123	80	81	82
D5-EtFOSAA	12-126	86	85	90
13C2-6:2 FTS	10-226	68	67	67
13C2-8:2 FTS	10-202	83	78	76

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

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	Batch QC KQ1818747-01	Batch QC KQ1818747-02
13C3-PFBS	20-109	82	74
18O2-PFHxS	26-122	93	101
13C4-PFOS	25-121	76	77
13C4-PFBA	27-124	89	95
13C5-PFPeA	27-138	100	97
13C2-PFHxA	28-132	99	106
13C4-PFHpA	19-139	101	90
13C4-PFOA	22-130	82	81
13C5-PFNA	20-127	91	91
13C2-PFDA	24-125	83	83
13C2-PFUnDA	22-125	67	64
13C2-PFDoDA	19-122	66	63
13C2-PFTeDA	13-124	64	64
13C8-FOSA	18-109	73	70
D3-MeFOSAA	9-123	65	62
D5-EtFOSAA	12-126	71	67
13C2-6:2 FTS	10-226	86	76
13C2-8:2 FTS	10-202	70	69

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

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Extraction Method: EPA 3550B

Surrogate	Control Limits	IDW(soil 1) 121418 K1812302-001	IDW(soil 2) 121418 K1812302-002	Method Blank KQ1818316-06
13C3-PFBS	33-109	81	79	87
18O2-PFHxS	36-120	87	89	75
13C4-PFOS	32-130	87	87	78
13C4-PFBA	34-116	89	90	90
13C5-PFPeA	39-133	107	104	108
13C2-PFHxA	32-136	96	94	98
13C4-PFHpA	36-133	95	96	84
13C4-PFOA	31-134	85	84	85
13C5-PFNA	27-133	85	83	87
13C2-PFDA	30-137	87	89	81
13C2-PFUnDA	32-146	90	88	91
13C2-PFDoDA	36-136	91	90	89
13C2-PFTeDA	39-138	114	111	105
13C8-FOSA	40-132	98	99	103
D3-MeFOSAA	20-154	159*	152	151
D5-EtFOSAA	29-153	162*	159*	156*
13C2-6:2 FTS	30-140	54	51	51
13C2-8:2 FTS	9-171	59	54	51

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

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
Extraction Method: EPA 3550B

Surrogate	Control Limits	Lab Control Sample KQ1818316-05	IDW(soil 2) 121418 KQ1818316-01	IDW(soil 2) 121418 KQ1818316-02
13C3-PFBS	33-109	80	85	88
18O2-PFHxS	36-120	78	91	92
13C4-PFOS	32-130	78	89	87
13C4-PFBA	34-116	89	91	92
13C5-PFPeA	39-133	107	104	106
13C2-PFHxA	32-136	91	92	92
13C4-PFHpA	36-133	105	94	98
13C4-PFOA	31-134	85	85	86
13C5-PFNA	27-133	79	85	81
13C2-PFDA	30-137	85	88	87
13C2-PFUnDA	32-146	87	90	88
13C2-PFDoDA	36-136	86	93	90
13C2-PFTeDA	39-138	108	114	114
13C8-FOSA	40-132	102	96	97
D3-MeFOSAA	20-154	158*	155*	157*
D5-EtFOSAA	29-153	161*	159*	164*
13C2-6:2 FTS	30-140	53	53	52
13C2-8:2 FTS	9-171	53	57	55

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

Client: AECOM **Service Request:**K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:**01/05/19 11:03

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190104_b5\010419_119 **Lab Code:**KQ1900180-01
Instrument ID: K-LCMS-06 **Analysis Lot:**621097
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	4,302,081	5.073
	Upper Limit ==>	8,604,162	6.07
	Lower Limit ==>	2,151,041	4.07
Associated Analyses			
Continuing Calibration Blank	KQ1900180-02	4346703	5.074
Method Blank	KQ1818747-04	4798522	5.072
Lab Control Sample	KQ1818747-05	4851773	5.074
Duplicate Lab Control Sample	KQ1818747-06	4663502	5.074
Batch QC	R1812115-005	4711087	5.073
Batch QCMS	KQ1818747-01	4243452	5.076
Batch QCDMS	KQ1818747-02	4118488	5.077
IDW(water) 121418	K1812302-003	3962089	5.079
Terminal 121418	K1812302-004	4064593	5.071

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QA/QC Report

Client: AECOM **Service Request:**K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:**01/25/19 20:04

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190125_b6\190125_071 **Lab Code:**KQ1901091-01
Instrument ID: K-LCMS-06 **Analysis Lot:**623320
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	5,035,241	5.071
	Upper Limit ==>	10,070,482	6.07
	Lower Limit ==>	2,517,621	4.07
Associated Analyses			
Continuing Calibration Blank	KQ1901091-02	4963451	5.076
IDW(water) 121418	K1812302-003	5400040	5.069

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:** 12/21/18 02:58

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\122018_b3\122018_046 **Lab Code:** KQ1818586-01
Instrument ID: K-LCMS-06 **Analysis Lot:** 619743
Analysis Method: PFC/537M **Signal ID:** 1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	4,955,032	5.060
	Upper Limit ==>	9,910,064	6.06
	Lower Limit ==>	2,477,516	4.06
Associated Analyses			
Continuing Calibration Blank	KQ1818586-02	5433484	5.066
Method Blank	KQ1818316-06	6777908	5.065
Lab Control Sample	KQ1818316-05	6471741	5.058
IDW(soil 1) 121418	K1812302-001	6302301	5.061
IDW(soil 2) 121418	K1812302-002	6429567	5.059
IDW(soil 2) 121418MS	KQ1818316-01	6460521	5.060
IDW(soil 2) 121418DMS	KQ1818316-02	6581521	5.059

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Collected:**	12/14/18
Sample Matrix:	Soil	**Date Received:**	12/15/18
		Date Analyzed:	12/21/18
		Date Extracted:	12/17/18

Duplicate Matrix Spike Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	IDW(soil 2) 121418	**Units:**	ng/g
Lab Code:	K1812302-002	**Basis:**	Dry
Analysis Method:	PFC/537M		
Prep Method:	EPA 3550B		

		Matrix Spike KQ1818316-01			**Duplicate Matrix Spike** KQ1818316-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perfluorobutane sulfonic acid (PFBS)	0.22 U	6.85	7.00	98	6.66	6.95	96	48-148	3	50
Perfluorohexane sulfonic acid (PFHxS)	0.30 U	6.54	7.20	91	7.21	7.15	101	75-142	10	50
Perfluoroheptane sulfonic acid (PFHpS)	0.062 U	7.13	7.52	95	7.28	7.47	98	69-173	2	50
Perfluorooctane sulfonic acid (PFOS)	0.13 U	7.13	7.33	97	7.33	7.28	101	72-141	3	50
Perfluorodecane sulfonic acid (PFDS)	0.17 U	7.71	7.61	101	7.99	7.55	106	83-152	4	50
Perfluorobutanoic acid (PFBA)	0.39 U	7.95	7.89	101	7.91	7.83	101	29-179	<1	50
Perfluoropentanoic acid (PFPeA)	0.21 U	7.13	7.89	90	7.09	7.83	90	64-131	<1	50
Perfluorohexanoic acid (PFHxA)	0.31 U	7.42	7.89	94	7.56	7.83	97	68-148	2	50
Perfluoroheptanoic acid (PFHpA)	0.19 U	7.37	7.89	93	7.34	7.83	94	73-136	<1	50
Perfluorooctanoic acid (PFOA)	0.13 U	7.92	7.89	100	7.87	7.83	100	77-151	<1	50
Perfluorononanoic acid (PFNA)	0.33 U	7.54	7.89	96	7.67	7.83	98	63-160	2	50
Perfluorodecanoic acid (PFDA)	0.26 U	7.81	7.89	99	7.86	7.83	100	73-142	<1	50
Perfluoroundecanoic acid (PFUnDA)	0.18 U	7.53	7.89	95	7.40	7.83	95	69-147	2	50
Perfluorododecanoic acid (PFDoDA)	0.27 U	8.08	7.89	102	7.76	7.83	99	69-150	4	50
Perfluorotridecanoic acid (PFTrDA)	0.21 U	6.57	7.89	83	6.39	7.83	82	63-134	3	50
Perfluorotetradecanoic acid (PFTeDA)	0.18 U	7.42	7.89	94	7.54	7.83	96	70-143	2	50
Perfluorooctane sulfonamide (FOSA)	0.067 U	7.17	7.89	91	7.24	7.83	92	63-138	1	50
N-Methyl perfluorooctane sulfonamidoacetic acid	0.27 U	7.73	7.89	98	8.33	7.83	106	69-162	7	50
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.20 U	8.06	7.89	102	7.54	7.83	96	57-159	7	50
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.15 U	7.45	7.51	99	7.87	7.45	106	69-147	6	50
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.029 U	7.18	7.58	95	7.12	7.52	95	66-141	<1	50

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.

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	12/21/18
Sample Matrix:	Soil	**Date Extracted:**	12/17/18

Lab Control Sample Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method:	PFC/537M	**Units:**	ng/g
Prep Method:	EPA 3550B	**Basis:**	Dry
		Analysis Lot:	619743

Lab Control Sample
KQ1818316-05

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	7.17	7.61	94	69-147
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	7.10	7.68	92	66-141
N-Ethyl perfluorooctane sulfonamidoacetic acid	7.34	8.00	92	57-159
N-Methyl perfluorooctane sulfonamidoacetic acid	9.15	8.00	114	69-162
Perfluorobutane sulfonic acid (PFBS)	6.93	7.10	98	48-148
Perfluorobutanoic acid (PFBA)	8.14	8.00	102	29-179
Perfluorodecane sulfonic acid (PFDS)	8.97	7.72	116	83-152
Perfluorodecanoic acid (PFDA)	7.79	8.00	97	73-142
Perfluorododecanoic acid (PFDoDA)	8.56	8.00	107	69-150
Perfluoroheptane sulfonic acid (PFHpS)	8.52	7.63	112	69-173
Perfluoroheptanoic acid (PFHpA)	7.00	8.00	88	73-136
Perfluorohexane sulfonic acid (PFHxS)	6.93	7.30	95	75-142
Perfluorohexanoic acid (PFHxA)	7.94	8.00	99	68-148
Perfluorononanoic acid (PFNA)	8.25	8.00	103	63-160
Perfluorooctane sulfonamide (FOSA)	7.13	8.00	89	63-138
Perfluorooctane sulfonic acid (PFOS)	7.60	7.43	102	72-141
Perfluorooctanoic acid (PFOA)	7.86	8.00	98	77-151
Perfluoropentanoic acid (PFPeA)	7.05	8.00	88	64-131
Perfluorotetradecanoic acid (PFTeDA)	7.70	8.00	96	70-143
Perfluorotridecanoic acid (PFTrDA)	6.74	8.00	84	63-134
Perfluoroundecanoic acid (PFUnDA)	7.95	8.00	99	69-147

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	01/05/19
Sample Matrix:	Water	**Date Extracted:**	12/27/18

Duplicate Lab Control Sample Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method:	PFC/537M	**Units:**	ng/L
Prep Method:	EPA 3535A	**Basis:**	NA
		Analysis Lot:	621097

	Lab Control Sample KQ1818747-05			Duplicate Lab Control Sample KQ1818747-06					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	36.9	30.4	121	39.8	30.4	131	71-142	8	30
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	31.7	30.7	103	31.0	30.7	101	69-137	2	30
N-Ethyl perfluorooctane sulfonamidoacetic acid	33.3	32.0	104	28.8	32.0	90	58-155	14	30
N-Methyl perfluorooctane sulfonamidoacetic acid	37.3	32.0	116	33.8	32.0	106	69-151	10	30
Perfluorobutane sulfonic acid (PFBS)	30.6	28.4	108	30.3	28.4	107	61-140	<1	30
Perfluorobutanoic acid (PFBA)	34.6	32.0	108	32.4	32.0	101	51-157	6	30
Perfluorodecane sulfonic acid (PFDS)	28.9	30.9	94	30.9	30.9	100	69-146	7	30
Perfluorodecanoic acid (PFDA)	31.2	32.0	97	32.0	32.0	100	73-136	3	30
Perfluorododecanoic acid (PFDoDA)	35.0	32.0	109	35.4	32.0	111	71-138	1	30
Perfluoroheptane sulfonic acid (PFHpS)	31.4	30.5	103	30.4	30.5	100	62-178	3	30
Perfluoroheptanoic acid (PFHpA)	28.1	32.0	88	31.8	32.0	99	72-133	12	30
Perfluorohexane sulfonic acid (PFHxS)	29.7	29.2	102	27.4	29.2	94	69-144	8	30
Perfluorohexanoic acid (PFHxA)	33.6	32.0	105	31.8	32.0	99	71-138	6	30
Perfluorononanoic acid (PFNA)	32.7	32.0	102	32.2	32.0	101	69-148	2	30
Perfluorooctane sulfonamide (FOSA)	31.1	32.0	97	30.8	32.0	96	64-135	<1	30
Perfluorooctane sulfonic acid (PFOS)	31.1	29.7	105	27.9	29.7	94	71-139	11	30
Perfluorooctanoic acid (PFOA)	37.4	32.0	117	37.4	32.0	117	74-146	<1	30
Perfluoropentanoic acid (PFPeA)	31.8	32.0	99	30.8	32.0	96	67-127	3	30
Perfluorotetradecanoic acid (PFTeDA)	34.7	32.0	109	34.6	32.0	108	63-139	<1	30
Perfluorotridecanoic acid (PFTrDA)	31.3	32.0	98	34.7	32.0	109	65-140	10	30
Perfluoroundecanoic acid (PFUnDA)	32.2	32.0	101	34.4	32.0	108	76-134	7	30

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QA/QC Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	12/21/18 03:19
Sample Matrix:	Soil	**Date Extracted:**	12/17/18

Method Blank Summary

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1818316-06	**File ID:**	J:\LCMS06\Data\122018_b3\122018_048
Analysis Method:	PFC/537M	**Analysis Lot:**	619743
Prep Method:	EPA 3550B	**Extraction Lot:**	328407

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818316-05	J:\LCMS06\Data\122018_b3\122018_049	12/21/18 03:29
IDW(soil 1) 121418	K1812302-001	J:\LCMS06\Data\122018_b3\122018_050	12/21/18 03:40
IDW(soil 2) 121418	K1812302-002	J:\LCMS06\Data\122018_b3\122018_051	12/21/18 03:50
IDW(soil 2) 121418MS	KQ1818316-01	J:\LCMS06\Data\122018_b3\122018_052	12/21/18 04:01
IDW(soil 2) 121418DMS	KQ1818316-02	J:\LCMS06\Data\122018_b3\122018_053	12/21/18 04:11

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QA/QC Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	01/05/19 11:24
Sample Matrix:	Water	**Date Extracted:**	12/27/18

Method Blank Summary

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1818747-04	**File ID:**	J:\LCMS06\Data\190104_b5\010419_121
Analysis Method:	PFC/537M	**Analysis Lot:**	621097,623320
Prep Method:	EPA 3535A	**Extraction Lot:**	328931

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1818747-05	J:\LCMS06\Data\190104_b5\010419_122	01/05/19 11:34
Duplicate Lab Control Sample	KQ1818747-06	J:\LCMS06\Data\190104_b5\010419_123	01/05/19 11:45
Batch QC	R1812115-005	J:\LCMS06\Data\190104_b5\010419_128	01/05/19 12:37
Batch QCMS	KQ1818747-01	J:\LCMS06\Data\190104_b5\010419_129	01/05/19 12:48
Batch QCDMS	KQ1818747-02	J:\LCMS06\Data\190104_b5\010419_130	01/05/19 12:58
IDW(water) 121418	K1812302-003	J:\LCMS06\Data\190104_b5\010419_133	01/05/19 13:29
Terminal 121418	K1812302-004	J:\LCMS06\Data\190104_b5\010419_134	01/05/19 13:40
IDW(water) 121418	K1812302-003	J:\LCMS06\Data\190125_b6\190125_077	01/25/19 21:07

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QA/QC Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	12/21/18 03:29
Sample Matrix:	Soil	**Date Extracted:**	12/17/18

Lab Control Sample Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1818316-05	**File ID:**	J:\LCMS06\Data\122018_b3\122018_049
Analysis Method:	PFC/537M	**Analysis Lot:**	619743
Prep Method:	EPA 3550B	**Extraction Lot:**	328407

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1818316-06	J:\LCMS06\Data\122018_b3\122018_048	12/21/18 03:19
IDW(soil 1) 121418	K1812302-001	J:\LCMS06\Data\122018_b3\122018_050	12/21/18 03:40
IDW(soil 2) 121418	K1812302-002	J:\LCMS06\Data\122018_b3\122018_051	12/21/18 03:50
IDW(soil 2) 121418MS	KQ1818316-01	J:\LCMS06\Data\122018_b3\122018_052	12/21/18 04:01
IDW(soil 2) 121418DMS	KQ1818316-02	J:\LCMS06\Data\122018_b3\122018_053	12/21/18 04:11

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	01/05/19 11:34
Sample Matrix:	Water	**Date Extracted:**	12/27/18

Lab Control Sample Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1818747-05	**File ID:**	J:\LCMS06\Data\190104_b5\010419_122
Analysis Method:	PFC/537M	**Analysis Lot:**	621097,623320
Prep Method:	EPA 3535A	**Extraction Lot:**	328931

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1818747-04	J:\LCMS06\Data\190104_b5\010419_121	01/05/19 11:24
Duplicate Lab Control Sample	KQ1818747-06	J:\LCMS06\Data\190104_b5\010419_123	01/05/19 11:45
Batch QC	R1812115-005	J:\LCMS06\Data\190104_b5\010419_128	01/05/19 12:37
Batch QCMS	KQ1818747-01	J:\LCMS06\Data\190104_b5\010419_129	01/05/19 12:48
Batch QCDMS	KQ1818747-02	J:\LCMS06\Data\190104_b5\010419_130	01/05/19 12:58
IDW(water) 121418	K1812302-003	J:\LCMS06\Data\190104_b5\010419_133	01/05/19 13:29
Terminal 121418	K1812302-004	J:\LCMS06\Data\190104_b5\010419_134	01/05/19 13:40
IDW(water) 121418	K1812302-003	J:\LCMS06\Data\190125_b6\190125_077	01/25/19 21:07

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1800576-01	0.05 PPB ICAL	121918_012	12/19/2018 20:34
02	KC1800576-02	0.10 PPB ICAL	121918_013	12/19/2018 20:44
03	KC1800576-03	0.50 PPB ICAL	121918_014	12/19/2018 20:55
04	KC1800576-04	1.0 PPB ICAL	121918_015	12/19/2018 21:05
05	KC1800576-05	5.0 PPB ICAL	121918_016	12/19/2018 21:16
06	KC1800576-06	10.0 PPB ICAL	121918_017	12/19/2018 21:26
07	KC1800576-07	15.0 PPB ICAL	121918_018	12/19/2018 21:37

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.1627	02	5	0.1712	03	5	0.1658	04	5	0.1587
05	5	0.1663	06	5	0.1513	07	5	0.1531			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.1146	02	5	0.118	03	5	0.1111	04	5	0.1116
05	5	0.1071	06	5	0.1006	07	5	0.09845			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.7296	02	5	0.8043	03	5	0.7679	04	5	0.7722
05	5	0.7889	06	5	0.744	07	5	0.7167			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.216	02	5	1.287	03	5	1.301	04	5	1.24
05	5	1.312	06	5	1.216	07	5	1.188			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.032	02	5	1.066	03	5	1.056	04	5	1.086
05	5	1.104	06	5	1.123	07	5	1.204			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.9037	02	5	0.9342	03	5	0.8917	04	5	0.8723
05	5	0.9747	06	5	0.9176	07	5	0.9628			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.8605	02	5	0.8791	03	5	0.8763	04	5	0.8556
05	5	0.8717	06	5	0.8754	07	5	0.8688			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.1878	02	5	0.2002	03	5	0.2069	04	5	0.2078

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5	0.217	06	5	0.2254	07	5	0.2311			

13C4-PFBA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.5695	02	5	0.6082	03	5	0.5981	04	5	0.5986
05	5	0.6482	06	5	0.6461	07	5	0.6869			

13C4-PFHpA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.8069	02	5	0.881	03	5	0.7919	04	5	0.817
05	5	0.8391	06	5	0.7323	07	5	0.7251			

13C4-PFOA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	1.274	02	5	1.328	03	5	1.258	04	5	1.271
05	5	1.281	06	5	1.22	07	5	1.262			

13C4-PFOS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.1122	02	5	0.1294	03	5	0.1265	04	5	0.1252
05	5	0.1389	06	5	0.1287	07	5	0.1388			

13C5-PFNA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.7971	02	5	0.8279	03	5	0.7976	04	5	0.8076
05	5	0.845	06	5	0.8268	07	5	0.8974			

13C5-PFPeA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.2889	02	5	0.3073	03	5	0.3001	04	5	0.3016
05	5	0.3197	06	5	0.3251	07	5	0.3397			

13C8-FOSA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.2802	02	5	0.2962	03	5	0.3081	04	5	0.3055
05	5	0.3096	06	5	0.3022	07	5	0.3198			

18O2-PFHxS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.1171	02	5	0.133	03	5	0.1171	04	5	0.1188
05	5	0.1418	06	5	0.1173	07	5	0.1388			

6:2 Fluorotelomer sulfonic acid (6:2 FTS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.047558	0.6612	02	0.0951168	0.8771	03	0.475584	0.7344	04	0.951168	0.8273
05	4.75584	0.7468	06	9.51168	0.7308	07	14.26755	0.7059			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

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

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.048002	0.867	02	0.0960045	0.9104	03	0.480022	0.9461	04	0.960045	0.9214
05	4.80022	0.927	06	9.60045	0.8913	07	14.40067	0.8277			

D3-MeFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.09688	02	5	0.1012	03	5	0.09804	04	5	0.09692
05	5	0.1086	06	5	0.1079	07	5	0.1173			

D5-EtFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5	0.09202	02	5	0.1085	03	5	0.1064	04	5	0.1073
05	5	0.1191	06	5	0.1042	07	5	0.1173			

N-Ethyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.1	0.478	03	0.5	0.2974	04	1	0.3762	05	5	0.3584
06	10	0.4771	07	15	0.4092						

N-Methyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.4852	02	0.1	0.498	03	0.5	0.4147	04	1	0.6246
05	5	0.5771	06	10	0.5779	07	15	0.5391			

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.044368	0.97	02	0.088737	0.8883	03	0.443685	0.8314	04	0.88737	0.8496
05	4.43685	0.902	06	8.8737	0.8803	07	13.31055	0.8818			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.8438	02	0.1	0.8811	03	0.5	0.8096	04	1	0.8213
05	5	0.8658	06	10	0.8815	07	15	0.8644			

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.048233	1.023	02	0.0964667	1.005	03	0.482333	0.9899	04	0.964667	0.9897
05	4.82333	0.9894	06	9.64667	1.097	07	14.46998	1.059			

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.9332	02	0.1	0.7656	03	0.5	0.7968	04	1	0.8255
05	5	0.8317	06	10	0.8712	07	15	0.8606			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.4609	02	0.1	0.5368	03	0.5	0.5205	04	1	0.5638
05	5	0.5459	06	10	0.5597	07	15	0.5446			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.047672	0.9901	02	0.0953438	0.879	03	0.476719	0.9978	04	0.953438	1.008
05	4.76719	0.9345	06	9.53438	1.127	07	14.3016	1.009			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	1.377	02	0.1	1.236	03	0.5	1.301	04	1	1.356
05	5	1.35	06	10	1.382	07	15	1.456			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.0913075	1.034	03	0.456538	0.9753	04	0.913075	1.051	05	4.56538	1.081
06	9.13075	1.077	07	13.69613	1.011						

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.9575	02	0.1	0.9366	03	0.5	0.8768	04	1	0.8718
05	5	0.877	06	10	0.9024	07	15	0.9124			

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.8579	02	0.1	0.9546	03	0.5	0.8034	04	1	0.7958
05	5	0.8225	06	10	0.8472	07	15	0.8119			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	1.575	02	0.1	1.692	03	0.5	1.53	04	1	1.541
05	5	1.553	06	10	1.595	07	15	1.543			

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.046461	0.7797	02	0.0929229	0.6197	03	0.464615	0.6942	04	0.929229	0.694
05	4.64615	0.7118	06	9.29229	0.7258	07	13.93845	0.7004			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.8413	02	0.1	0.7426	03	0.5	0.7215	04	1	0.7063
05	5	0.7811	06	10	0.7982	07	15	0.7348			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	7.423	02	0.1	4.954	03	0.5	3.213	04	1	2.951
05	5	2.886	06	10	2.856	07	15	2.81			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.9905	02	0.1	0.6678	03	0.5	0.3789	04	1	0.3568
05	5	0.3383	06	10	0.3434	07	15	0.333			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	1.032	02	0.1	1.021	03	0.5	0.984	04	1	1.028
05	5	1.045	06	10	1.062	07	15	0.9973			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.05	0.8372	02	0.1	0.8494	03	0.5	0.7336	04	1	0.7544
05	5	0.7535	06	10	0.7844	07	15	0.7712			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
13C2-6:2 FTS	SURR	Average RF	% RSD	4.5	≤20	0.1613	
13C2-8:2 FTS	SURR	Average RF	% RSD	6.6	≤20	0.1088	
13C2-PFDA	SURR	Average RF	% RSD	4.2	≤20	0.7605	
13C2-PFDoDA	SURR	Average RF	% RSD	3.9	≤20	1.251	
13C2-PFHxA	SURR	Average RF	% RSD	5.1	≤20	1.096	
13C2-PFTeDA	SURR	Average RF	% RSD	4.0	≤20	0.9224	
13C2-PFUnDA	SURR	Average RF	% RSD	1.0	≤20	0.8696	
13C3-PFBS	SURR	Average RF	% RSD	7.1	≤20	0.2109	
13C4-PFBA	SURR	Average RF	% RSD	6.4	≤20	0.6222	
13C4-PFHpA	SURR	Average RF	% RSD	7.0	≤20	0.799	
13C4-PFOA	SURR	Average RF	% RSD	2.5	≤20	1.27	
13C4-PFOS	SURR	Average RF	% RSD	7.1	≤20	0.1285	
13C5-PFNA	SURR	Average RF	% RSD	4.2	≤20	0.8285	
13C5-PFPeA	SURR	Average RF	% RSD	5.6	≤20	0.3118	
13C8-FOSA	SURR	Average RF	% RSD	4.1	≤20	0.3031	
18O2-PFHxS	SURR	Average RF	% RSD	8.8	≤20	0.1263	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	9.7	≤20	0.7548	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	4.5	≤20	0.8987	
D3-MeFOSAA	SURR	Average RF	% RSD	7.4	≤20	0.1038	
D5-EtFOSAA	SURR	Average RF	% RSD	8.3	≤20	0.1078	
N-Ethyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	17.7	≤20	0.3994	
N-Methyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	13.3	≤20	0.5309	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	5.0	≤20	0.8862	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	3.3	≤20	0.8525	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	4.1	≤20	1.022	
Perfluorodecanoic acid (PFDA)	TRG	Average RF	% RSD	6.5	≤20	0.8407	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9998	≥0.99	0.5332	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	7.7	≤20	0.9922	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9968	≥0.99	1.351	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Average RF	% RSD	3.9	≤20	1.038	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9997	≥0.99	0.9049	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Perfluorononanoic acid (PFNA)	TRG	Linear	R2	0.9995	≥0.99	0.8419	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	3.5	≤20	1.575	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	6.8	≤20	0.7036	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9983	≥0.99	0.7608	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9992	≥0.99	3.87	
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9992	≥0.99	0.487	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9992	≥0.99	1.024	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9997	≥0.99	0.7834	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900007-01	0.05 PPB ICAL	010419_016	01/04/2019 17:06
02	KC1900007-02	0.10 PPB ICAL	010419_017	01/04/2019 17:16
03	KC1900007-03	0.50 PPB ICAL	010419_018	01/04/2019 17:27
04	KC1900007-04	1.0 PPB ICAL	010419_019	01/04/2019 17:37
05	KC1900007-05	5.0 PPB ICAL	010419_020	01/04/2019 17:48
06	KC1900007-06	10.0 PPB ICAL	010419_021	01/04/2019 17:58
07	KC1900007-07	15.0 PPB ICAL	010419_022	01/04/2019 18:08

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1308	02	5.0000	0.13	03	5.0000	0.1311	04	5.0000	0.1208
05	5.0000	0.1271	06	5.0000	0.1143	07	5.0000	0.1152			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1008	02	5.0000	0.1014	03	5.0000	0.1013	04	5.0000	0.09121
05	5.0000	0.09768	06	5.0000	0.08949	07	5.0000	0.09416			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8706	02	5.0000	0.8616	03	5.0000	0.898	04	5.0000	0.8552
05	5.0000	0.871	06	5.0000	0.8668	07	5.0000	0.8467			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.15	02	5.0000	1.187	03	5.0000	1.231	04	5.0000	1.173
05	5.0000	1.216	06	5.0000	1.123	07	5.0000	1.162			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.186	02	5.0000	1.138	03	5.0000	1.186	04	5.0000	1.198
05	5.0000	1.222	06	5.0000	1.24	07	5.0000	1.188			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8021	02	5.0000	0.8756	03	5.0000	0.8577	04	5.0000	0.8003
05	5.0000	0.8534	06	5.0000	0.8312	07	5.0000	0.8764			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8011	02	5.0000	0.8433	03	5.0000	0.8042	04	5.0000	0.8011
05	5.0000	0.816	06	5.0000	0.8017	07	5.0000	0.8121			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1916	02	5.0000	0.1942	03	5.0000	0.1912	04	5.0000	0.1891

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5.0000	0.2092	06	5.0000	0.2061	07	5.0000	0.2192			

13C4-PFBA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.5982	02	5.0000	0.6289	03	5.0000	0.6281	04	5.0000	0.6049
05	5.0000	0.664	06	5.0000	0.6581	07	5.0000	0.7089			

13C4-PFHpA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8799	02	5.0000	0.9147	03	5.0000	0.8235	04	5.0000	0.935
05	5.0000	0.9266	06	5.0000	0.8927	07	5.0000	0.8968			

13C4-PFOA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.189	02	5.0000	1.217	03	5.0000	1.248	04	5.0000	1.175
05	5.0000	1.246	06	5.0000	1.106	07	5.0000	1.174			

13C4-PFOS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1329	02	5.0000	0.1397	03	5.0000	0.137	04	5.0000	0.1386
05	5.0000	0.1566	06	5.0000	0.147	07	5.0000	0.1567			

13C5-PFNA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.027	02	5.0000	0.981	03	5.0000	1.038	04	5.0000	0.9908
05	5.0000	0.9563	06	5.0000	1.016	07	5.0000	0.9442			

13C5-PFPeA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3381	02	5.0000	0.3514	03	5.0000	0.3496	04	5.0000	0.3404
05	5.0000	0.3777	06	5.0000	0.3621	07	5.0000	0.3834			

13C8-FOSA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3664	02	5.0000	0.3792	03	5.0000	0.3722	04	5.0000	0.3645
05	5.0000	0.4007	06	5.0000	0.3837	07	5.0000	0.4167			

18O2-PFHxS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1373	02	5.0000	0.1474	03	5.0000	0.1336	04	5.0000	0.136
05	5.0000	0.1324	06	5.0000	0.1439	07	5.0000	0.1358			

6:2 Fluorotelomer sulfonic acid (6:2 FTS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0476	0.9542	02	0.0951	0.8992	03	0.4756	0.9398	04	0.9512	0.9758
05	4.7558	0.9273	06	9.5117	0.8951	07	14.2676	0.8753			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

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

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0480	0.9993	02	0.0960	0.875	03	0.4800	0.8721	04	0.9600	0.9426
05	4.8002	0.8593	06	9.6004	0.8731	07	14.4007	0.7487			

D3-MeFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1338	02	5.0000	0.151	03	5.0000	0.1501	04	5.0000	0.1415
05	5.0000	0.1625	06	5.0000	0.1567	07	5.0000	0.1664			

D5-EtFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1322	02	5.0000	0.1386	03	5.0000	0.1494	04	5.0000	0.1403
05	5.0000	0.1491	06	5.0000	0.152	07	5.0000	0.158			

N-Ethyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.2785	02	0.1000	0.2032	03	0.5000	0.4269	04	1.0000	0.4918
05	5.0000	0.4622	06	10.0000	0.4722	07	15.0000	0.4489			

N-Methyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.1000	0.5413	03	0.5000	0.513	04	1.0000	0.4974	05	5.0000	0.5372
06	10.0000	0.5411	07	15.0000	0.5149						

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0444	0.8992	02	0.0887	1.029	03	0.4437	1.029	04	0.8874	1.023
05	4.4368	1.049	06	8.8737	1.054	07	13.3106	1.047			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.9241	02	0.1000	0.8255	03	0.5000	0.8704	04	1.0000	0.8628
05	5.0000	0.9053	06	10.0000	0.8936	07	15.0000	0.8919			

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0482	0.996	02	0.0965	1.17	03	0.4823	0.8631	04	0.9647	0.8577
05	4.8233	0.8346	06	9.6467	0.8635	07	14.4700	0.8505			

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.8542	02	0.1000	0.9002	03	0.5000	0.7783	04	1.0000	0.8143
05	5.0000	0.8259	06	10.0000	0.847	07	15.0000	0.8401			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.4453	02	0.1000	0.5997	03	0.5000	0.4609	04	1.0000	0.5109
05	5.0000	0.5354	06	10.0000	0.5552	07	15.0000	0.5494			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0477	0.9493	02	0.0953	0.9036	03	0.4767	1.001	04	0.9534	0.9489
05	4.7672	1.114	06	9.5344	1.002	07	14.3016	1.136			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.297	02	0.1000	0.9014	03	0.5000	1.118	04	1.0000	1.007
05	5.0000	1.023	06	10.0000	1.075	07	15.0000	1.081			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0457	0.8258	02	0.0913	1.153	03	0.4565	0.8817	04	0.9131	0.8898
05	4.5654	0.9613	06	9.1308	1.039	07	13.6961	0.9921			

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.9356	02	0.1000	0.8701	03	0.5000	0.8757	04	1.0000	0.8552
05	5.0000	0.8876	06	10.0000	0.9036	07	15.0000	0.904			

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.5764	02	0.1000	0.6831	03	0.5000	0.6764	04	1.0000	0.6422
05	5.0000	0.6923	06	10.0000	0.6701	07	15.0000	0.6552			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.359	02	0.1000	1.28	03	0.5000	1.273	04	1.0000	1.366
05	5.0000	1.367	06	10.0000	1.389	07	15.0000	1.316			

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0465	0.8609	02	0.0929	0.7585	03	0.4646	0.6846	04	0.9292	0.6736
05	4.6461	0.728	06	9.2923	0.7249	07	13.9384	0.7308			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.8884	02	0.1000	0.8683	03	0.5000	0.7525	04	1.0000	0.7984
05	5.0000	0.7945	06	10.0000	0.8753	07	15.0000	0.7979			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	6.582	02	0.1000	4.619	03	0.5000	2.823	04	1.0000	2.538
05	5.0000	2.464	06	10.0000	2.478	07	15.0000	2.455			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.03	02	0.1000	0.6328	03	0.5000	0.3426	04	1.0000	0.3466
05	5.0000	0.3195	06	10.0000	0.3111	07	15.0000	0.3083			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.9974	02	0.1000	0.8928	03	0.5000	0.8715	04	1.0000	0.8758
05	5.0000	0.9218	06	10.0000	0.8895	07	15.0000	0.8955			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.8364	02	0.1000	0.8862	03	0.5000	0.7519	04	1.0000	0.7764
05	5.0000	0.8119	06	10.0000	0.7964	07	15.0000	0.8182			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
13C2-6:2 FTS	SURR	Average RF	% RSD	5.9	≤20	0.1242	
13C2-8:2 FTS	SURR	Average RF	% RSD	5.2	≤20	0.09659	
13C2-PFDA	SURR	Average RF	% RSD	1.9	≤20	0.8671	
13C2-PFDoDA	SURR	Average RF	% RSD	3.2	≤20	1.177	
13C2-PFHxA	SURR	Average RF	% RSD	2.7	≤20	1.194	
13C2-PFTeDA	SURR	Average RF	% RSD	3.8	≤20	0.8424	
13C2-PFUnDA	SURR	Average RF	% RSD	1.9	≤20	0.8114	
13C3-PFBS	SURR	Average RF	% RSD	5.7	≤20	0.2001	
13C4-PFBA	SURR	Average RF	% RSD	6.0	≤20	0.6416	
13C4-PFHpA	SURR	Average RF	% RSD	4.2	≤20	0.8956	
13C4-PFOA	SURR	Average RF	% RSD	4.1	≤20	1.194	
13C4-PFOS	SURR	Average RF	% RSD	6.6	≤20	0.1441	
13C5-PFNA	SURR	Average RF	% RSD	3.6	≤20	0.9933	
13C5-PFPeA	SURR	Average RF	% RSD	4.9	≤20	0.3575	
13C8-FOSA	SURR	Average RF	% RSD	5.0	≤20	0.3834	
18O2-PFHxS	SURR	Average RF	% RSD	4.0	≤20	0.138	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	3.9	≤20	0.9238	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	8.8	≤20	0.8814	
D3-MeFOSAA	SURR	Average RF	% RSD	7.5	≤20	0.1517	
D5-EtFOSAA	SURR	Average RF	% RSD	6.1	≤20	0.1457	
N-Ethyl perfluorooctane sulfonamidoacetic acid	TRG	Linear	R2	0.9988	≥0.99	0.3977	
N-Methyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	3.5	≤20	0.5241	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	5.3	≤20	1.018	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	3.7	≤20	0.8819	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	13.4	≤20	0.9194	
Perfluorodecanoic acid (PFDA)	TRG	Average RF	% RSD	4.5	≤20	0.8371	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9993	≥0.99	0.5224	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	8.6	≤20	1.008	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9993	≥0.99	1.072	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Average RF	% RSD	11.5	≤20	0.9633	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9992	≥0.99	0.8903	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Perfluorononanoic acid (PFNA)	TRG	Linear	R2	0.9995	≥0.99	0.6565	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	3.4	≤20	1.336	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	8.4	≤20	0.7373	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9979	≥0.99	0.825	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9999	≥0.99	3.423	
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9997	≥0.99	0.4702	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9998	≥0.99	0.9063	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9997	≥0.99	0.8111	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900021-01	0.05 PPB ICAL	190118_023	01/18/2019 17:47
02	KC1900021-02	0.10 PPB ICAL	190118_024	01/18/2019 17:57
03	KC1900021-03	0.50 PPB ICAL	190118_025	01/18/2019 18:08
04	KC1900021-04	1.0 PPB ICAL	190118_026	01/18/2019 18:18
05	KC1900021-05	5.0 PPB ICAL	190118_027	01/18/2019 18:28
06	KC1900021-06	10.0 PPB ICAL	190118_028	01/18/2019 18:39
07	KC1900021-07	15.0 PPB ICAL	190118_029	01/18/2019 18:49

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.08234	02	5.0000	0.07584	03	5.0000	0.07656	04	5.0000	0.07826
05	5.0000	0.07582	06	5.0000	0.08098	07	5.0000	0.0819			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.06825	02	5.0000	0.05933	03	5.0000	0.05942	04	5.0000	0.06078
05	5.0000	0.06162	06	5.0000	0.05972	07	5.0000	0.06582			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9069	02	5.0000	0.8028	03	5.0000	0.8014	04	5.0000	0.8123
05	5.0000	0.823	06	5.0000	0.8536	07	5.0000	0.8536			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.157	02	5.0000	1.091	03	5.0000	1.128	04	5.0000	1.108
05	5.0000	1.067	06	5.0000	1.113	07	5.0000	1.118			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.213	02	5.0000	1.1	03	5.0000	1.115	04	5.0000	1.099
05	5.0000	1.079	06	5.0000	1.094	07	5.0000	1.127			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9058	02	5.0000	0.8685	03	5.0000	0.8634	04	5.0000	0.8525
05	5.0000	0.8395	06	5.0000	0.9001	07	5.0000	0.9002			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8065	02	5.0000	0.8165	03	5.0000	0.8222	04	5.0000	0.8195
05	5.0000	0.8044	06	5.0000	0.817	07	5.0000	0.8072			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.2009	02	5.0000	0.1888	03	5.0000	0.1904	04	5.0000	0.1927

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5.0000	0.1935	06	5.0000	0.2021	07	5.0000	0.2074			

13C4-PFBA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.5487	02	5.0000	0.512	03	5.0000	0.5161	04	5.0000	0.5225
05	5.0000	0.5293	06	5.0000	0.5657	07	5.0000	0.5836			

13C4-PFHpA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.097	02	5.0000	0.87	03	5.0000	0.8296	04	5.0000	0.8447
05	5.0000	0.8623	06	5.0000	0.965	07	5.0000	0.9607			

13C4-PFOA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.068	02	5.0000	1.052	03	5.0000	1.04	04	5.0000	1.024
05	5.0000	1.017	06	5.0000	1.064	07	5.0000	1.062			

13C4-PFOS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1215	02	5.0000	0.1229	03	5.0000	0.126	04	5.0000	0.125
05	5.0000	0.1268	06	5.0000	0.1261	07	5.0000	0.1297			

13C5-PFNA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9949	02	5.0000	0.8358	03	5.0000	0.8735	04	5.0000	0.8683
05	5.0000	0.8673	06	5.0000	0.9468	07	5.0000	0.9313			

13C5-PFPeA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3411	02	5.0000	0.3176	03	5.0000	0.3182	04	5.0000	0.3203
05	5.0000	0.3231	06	5.0000	0.341	07	5.0000	0.339			

13C8-FOSA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.354	02	5.0000	0.3391	03	5.0000	0.3367	04	5.0000	0.3466
05	5.0000	0.343	06	5.0000	0.3534	07	5.0000	0.3628			

18O2-PFHxS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1274	02	5.0000	0.12	03	5.0000	0.1007	04	5.0000	0.09945
05	5.0000	0.1136	06	5.0000	0.1069	07	5.0000	0.1106			

6:2 Fluorotelomer sulfonic acid (6:2 FTS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0476	1.219	02	0.0951	0.9053	03	0.4756	1.008	04	0.9512	1.011
05	4.7558	0.968	06	9.5117	0.9217	07	14.2676	0.8912			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

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

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0480	0.7504	02	0.0960	0.792	03	0.4800	0.8367	04	0.9600	0.8026
05	4.8002	0.8239	06	9.6004	0.8427	07	14.4007	0.7097			

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0444	1.025	02	0.0887	1.017	03	0.4437	0.9529	04	0.8874	0.9821
05	4.4368	1.021	06	8.8737	1.036	07	13.3106	1.008			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.055	02	0.1000	0.9518	03	0.5000	0.9778	04	1.0000	0.9661
05	5.0000	1.013	06	10.0000	1.006	07	15.0000	0.991			

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0482	0.9012	02	0.0965	0.7455	03	0.4823	0.8933	04	0.9647	0.844
05	4.8233	0.8668	06	9.6467	0.8962	07	14.4700	0.8927			

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.8926	02	0.1000	0.8751	03	0.5000	0.8168	04	1.0000	0.7878
05	5.0000	0.8181	06	10.0000	0.8734	07	15.0000	0.8504			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.5065	02	0.1000	0.5392	03	0.5000	0.5365	04	1.0000	0.5264
05	5.0000	0.5397	06	10.0000	0.5447	07	15.0000	0.5468			

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0477	1.081	02	0.0953	1.031	03	0.4767	1.287	04	0.9534	1.313
05	4.7672	1.122	06	9.5344	1.304	07	14.3016	1.238			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.7913	02	0.1000	0.8231	03	0.5000	0.9105	04	1.0000	0.899
05	5.0000	0.9616	06	10.0000	0.9655	07	15.0000	0.9456			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0457	1.25	02	0.0913	0.8502	03	0.4565	0.855	04	0.9131	0.9781
05	4.5654	1.035	06	9.1308	1.003	07	13.6961	0.982			

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.9501	02	0.1000	0.9734	03	0.5000	0.8342	04	1.0000	0.8849
05	5.0000	0.9181	06	10.0000	0.9506	07	15.0000	0.9179			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.6345	02	0.1000	0.68	03	0.5000	0.7026	04	1.0000	0.6478
05	5.0000	0.7159	06	10.0000	0.7176	07	15.0000	0.7359			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.315	02	0.1000	1.35	03	0.5000	1.349	04	1.0000	1.304
05	5.0000	1.345	06	10.0000	1.373	07	15.0000	1.336			

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0465	0.8887	02	0.0929	0.5574	03	0.4646	0.6752	04	0.9292	0.7015
05	4.6461	0.7196	06	9.2923	0.7426	07	13.9384	0.7255			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.01	02	0.1000	0.8524	03	0.5000	0.8118	04	1.0000	0.8137
05	5.0000	0.8677	06	10.0000	0.8416	07	15.0000	0.8473			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	6.962	02	0.1000	5.021	03	0.5000	2.884	04	1.0000	2.601
05	5.0000	2.531	06	10.0000	2.525	07	15.0000	2.521			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.986	02	0.1000	0.6723	03	0.5000	0.4025	04	1.0000	0.3528
05	5.0000	0.3501	06	10.0000	0.3463	07	15.0000	0.3399			

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.82	02	0.1000	0.817	03	0.5000	0.8583	04	1.0000	0.8757
05	5.0000	0.8518	06	10.0000	0.8909	07	15.0000	0.8679			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.9548	02	0.1000	0.8711	03	0.5000	0.7746	04	1.0000	0.7712
05	5.0000	0.8067	06	10.0000	0.8072	07	15.0000	0.8139			

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
13C2-6:2 FTS	SURR	Average RF	% RSD	3.7	≤20	0.07881	
13C2-8:2 FTS	SURR	Average RF	% RSD	5.7	≤20	0.06213	
13C2-PFDA	SURR	Average RF	% RSD	4.5	≤20	0.8362	
13C2-PFDoDA	SURR	Average RF	% RSD	2.6	≤20	1.112	
13C2-PFHxA	SURR	Average RF	% RSD	4.0	≤20	1.118	
13C2-PFTeDA	SURR	Average RF	% RSD	3.0	≤20	0.8757	
13C2-PFUnDA	SURR	Average RF	% RSD	0.9	≤20	0.8133	
13C3-PFBS	SURR	Average RF	% RSD	3.5	≤20	0.1965	
13C4-PFBA	SURR	Average RF	% RSD	5.0	≤20	0.5397	
13C4-PFHpA	SURR	Average RF	% RSD	10.4	≤20	0.9185	
13C4-PFOA	SURR	Average RF	% RSD	1.9	≤20	1.046	
13C4-PFOS	SURR	Average RF	% RSD	2.1	≤20	0.1254	
13C5-PFNA	SURR	Average RF	% RSD	6.2	≤20	0.9025	
13C5-PFPeA	SURR	Average RF	% RSD	3.4	≤20	0.3286	
13C8-FOSA	SURR	Average RF	% RSD	2.7	≤20	0.348	
18O2-PFHxS	SURR	Average RF	% RSD	9.1	≤20	0.1113	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	11.3	≤20	0.9891	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	6.1	≤20	0.794	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	2.9	≤20	1.006	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	3.5	≤20	0.9944	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	6.4	≤20	0.8628	
Perfluorodecanoic acid (PFDA)	TRG	Average RF	% RSD	4.5	≤20	0.8449	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9997	≥0.99	0.5343	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	9.7	≤20	1.196	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9991	≥0.99	0.8995	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Average RF	% RSD	13.5	≤20	0.9933	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9995	≥0.99	0.9185	
Perfluorononanoic acid (PFNA)	TRG	Linear	R2	0.9982	≥0.99	0.6906	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	1.7	≤20	1.339	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	13.7	≤20	0.7158	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9998	≥0.99	0.8635	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9999	≥0.99	3.578	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9998	≥0.99	0.4929	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9996	≥0.99	0.8545	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9998	≥0.99	0.8285	

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1800576-08	1.0 PPB ICV	121918_020	12/19/2018 21:57

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.919	8.862E-1	9.182E-1	3.61	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	1.09	1.038E0	1.244E0	19.84	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.900	9.922E-1	9.366E-1	-5.609	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.913	7.036E-1	6.914E-1	-1.742	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.06	1.022E0	1.12E0	9.65	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.949	8.525E-1	8.091E-1	-5.095	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.917	3.87E0	2.778E0	-8.251	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.924	9.049E-1	8.342E-1	-7.570	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.990	1.351E0	1.34E0	-1.047	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.889	7.608E-1	6.769E-1	-11.065	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.910	8.419E-1	7.539E-1	-8.951	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.958	8.407E-1	8.056E-1	-4.166	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.922	7.834E-1	7.138E-1	-7.770	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.927	5.332E-1	5.066E-1	-7.276	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.946	1.024E0	9.687E-1	-5.351	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.916	4.87E-1	3.343E-1	-8.449	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.971	1.575E0	1.529E0	-2.935	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.22	5.309E-1	6.492E-1	22.28	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.30	3.994E-1	5.177E-1	29.63	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.03	7.548E-1	8.153E-1	8.02	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.03	8.987E-1	9.63E-1	7.15	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	4.78	2.109E-1	2.017E-1	-4.371	±30	Average RF
18O2-PFHxS	5.00	5.15	1.263E-1	1.3E-1	2.96	±30	Average RF
13C4-PFOS	5.00	4.80	1.285E-1	1.235E-1	-3.958	±30	Average RF
13C4-PFBA	5.00	4.80	6.222E-1	5.979E-1	-3.917	±30	Average RF
13C5-PFPeA	5.00	4.82	3.118E-1	3.005E-1	-3.614	±30	Average RF
13C2-PFHxA	5.00	5.19	1.096E0	1.137E0	3.76	±30	Average RF
13C4-PFHpA	5.00	4.95	7.99E-1	7.91E-1	-1.002	±30	Average RF
13C4-PFOA	5.00	4.91	1.27E0	1.248E0	-1.801	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 12/19/2018

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1800576 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C5-PFNA	5.00	5.10	8.285E-1	8.458E-1	2.09	±30	Average RF
13C2-PFDA	5.00	4.84	7.605E-1	7.366E-1	-3.140	±30	Average RF
13C2-PFUnDA	5.00	5.04	8.696E-1	8.759E-1	0.720	±30	Average RF
13C2-PFDoDA	5.00	4.84	1.251E0	1.213E0	-3.106	±30	Average RF
13C2-PFTeDA	5.00	4.68	9.224E-1	8.636E-1	-6.384	±30	Average RF
13C8-FOSA	5.00	5.03	3.031E-1	3.047E-1	0.544	±30	Average RF
D3-MeFOSAA	5.00	4.74	1.038E-1	9.841E-2	-5.221	±30	Average RF
D5-EtFOSAA	5.00	4.76	1.078E-1	1.026E-1	-4.892	±30	Average RF
13C2-6:2 FTS	5.00	4.50	1.613E-1	1.45E-1	-10.067	±30	Average RF
13C2-8:2 FTS	5.00	4.73	1.088E-1	1.028E-1	-5.485	±30	Average RF

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QA/QC Report

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1900007-08	1.0 PPB ICV	010419_024	01/04/2019 18:29

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.917	1.018E0	1.052E0	3.32	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.888	9.633E-1	9.369E-1	-2.737	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	1.05	1.008E0	1.109E0	10.06	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.891	7.373E-1	7.072E-1	-4.083	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.00	9.194E-1	9.529E-1	3.64	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.937	8.819E-1	8.263E-1	-6.307	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.919	3.423E0	2.444E0	-8.139	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.918	8.903E-1	8.109E-1	-8.216	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.915	1.072E0	9.772E-1	-8.546	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.966	8.25E-1	7.922E-1	-3.428	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.873	6.565E-1	5.797E-1	-12.670	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.971	8.371E-1	8.129E-1	-2.894	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.971	8.111E-1	7.846E-1	-2.912	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.948	5.224E-1	5.139E-1	-5.174	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.957	9.063E-1	8.595E-1	-4.313	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.967	4.702E-1	3.313E-1	-3.302	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	1.01	1.336E0	1.345E0	0.656	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.13	5.241E-1	5.934E-1	13.22	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.14	3.977E-1	5.114E-1	13.76	±30	Linear
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.05	9.238E-1	1.019E0	10.27	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.03	8.814E-1	9.495E-1	7.72	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	4.78	2.001E-1	1.914E-1	-4.336	±30	Average RF
18O2-PFHxS	5.00	4.57	1.38E-1	1.261E-1	-8.632	±30	Average RF
13C4-PFOS	5.00	4.44	1.441E-1	1.278E-1	-11.276	±30	Average RF
13C4-PFBA	5.00	4.81	6.416E-1	6.171E-1	-3.816	±30	Average RF
13C5-PFPeA	5.00	4.80	3.575E-1	3.434E-1	-3.954	±30	Average RF
13C2-PFHxA	5.00	5.20	1.194E0	1.243E0	4.08	±30	Average RF
13C4-PFHpA	5.00	4.27	8.956E-1	7.647E-1	-14.614	±30	Average RF
13C4-PFOA	5.00	4.84	1.194E0	1.156E0	-3.167	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/4/2019

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900007 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C5-PFNA	5.00	4.92	9.933E-1	9.781E-1	-1.535	±30	Average RF
13C2-PFDA	5.00	5.08	8.671E-1	8.816E-1	1.67	±30	Average RF
13C2-PFUnDA	5.00	4.94	8.114E-1	8.016E-1	-1.204	±30	Average RF
13C2-PFDoDA	5.00	5.26	1.177E0	1.238E0	5.18	±30	Average RF
13C2-PFTeDA	5.00	5.20	8.424E-1	8.761E-1	4.01	±30	Average RF
13C8-FOSA	5.00	4.88	3.834E-1	3.744E-1	-2.341	±30	Average RF
D3-MeFOSAA	5.00	5.14	1.517E-1	1.56E-1	2.82	±30	Average RF
D5-EtFOSAA	5.00	5.07	1.457E-1	1.477E-1	1.37	±30	Average RF
13C2-6:2 FTS	5.00	4.87	1.242E-1	1.209E-1	-2.630	±30	Average RF
13C2-8:2 FTS	5.00	4.80	9.659E-2	9.272E-2	-4.006	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1900021-08	1.0 PPB ICV	190118_031	01/18/2019 19:10

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.922	1.006E0	1.045E0	3.86	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	1.01	9.933E-1	1.102E0	10.97	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	1.06	1.196E0	1.335E0	11.58	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.866	7.158E-1	6.669E-1	-6.831	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.985	8.628E-1	8.812E-1	2.14	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.912	9.944E-1	9.066E-1	-8.830	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.912	3.578E0	2.503E0	-8.820	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.929	9.185E-1	8.594E-1	-7.067	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.927	8.995E-1	8.625E-1	-7.288	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.920	8.635E-1	7.82E-1	-8.046	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	1.00	6.906E-1	7.038E-1	-0.039	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.946	8.449E-1	7.993E-1	-5.391	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.929	8.285E-1	7.552E-1	-7.072	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.973	5.343E-1	5.253E-1	-2.673	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.941	8.545E-1	8.141E-1	-5.948	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.965	4.929E-1	3.602E-1	-3.464	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.949	1.339E0	1.271E0	-5.102	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.964	9.891E-1	1.002E0	1.31	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.07	7.94E-1	8.85E-1	11.46	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	5.00	1.965E-1	1.964E-1	-0.051	±30	Average RF
18O2-PFHxS	5.00	4.59	1.113E-1	1.022E-1	-8.127	±30	Average RF
13C4-PFOS	5.00	4.95	1.254E-1	1.242E-1	-0.980	±30	Average RF
13C4-PFBA	5.00	5.00	5.397E-1	5.395E-1	-0.041	±30	Average RF
13C5-PFPeA	5.00	5.00	3.286E-1	3.289E-1	0.078	±30	Average RF
13C2-PFHxA	5.00	5.09	1.118E0	1.138E0	1.79	±30	Average RF
13C4-PFHpA	5.00	5.05	9.185E-1	9.284E-1	1.09	±30	Average RF
13C4-PFOA	5.00	5.18	1.046E0	1.085E0	3.70	±30	Average RF
13C5-PFNA	5.00	5.30	9.025E-1	9.571E-1	6.04	±30	Average RF
13C2-PFDA	5.00	5.28	8.362E-1	8.831E-1	5.61	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport **Calibration Date:** 1/18/2019

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900021 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C2-PFUnDA	5.00	4.97	8.133E-1	8.083E-1	-0.617	±30	Average RF
13C2-PFDoDA	5.00	5.05	1.112E0	1.122E0	0.938	±30	Average RF
13C2-PFTeDA	5.00	5.14	8.757E-1	9.001E-1	2.79	±30	Average RF
13C8-FOSA	5.00	5.18	3.48E-1	3.606E-1	3.64	±30	Average RF
13C2-6:2 FTS	5.00	5.14	7.881E-2	8.096E-2	2.73	±30	Average RF
13C2-8:2 FTS	5.00	4.89	6.213E-2	6.078E-2	-2.178	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:** 12/21/18 02:58

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Calibration Date:** 12/19/2018
File ID: J:\LCMS06\Data\122018_b3\122018_046 **Calibration ID:** KC1800576
Signal ID: 1 **Analysis Lot:** 619743
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.851	0.8862	0.8503	95.9	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.776	1.0384	0.8826	85.0	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.884	0.9922	0.9201	92.7	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.879	0.7036	0.6654	94.6	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.895	1.0219	0.9484	92.8	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.01	0.8525	0.8633	101	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.960	3.8705	2.8967	96.0	-4.0	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.957	0.9049	0.8634	95.7	-4.3	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.985	1.3511	1.3335	98.5	-1.5	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.997	0.7608	0.7586	99.7	-0.3	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.976	0.8419	0.8076	97.6	-2.4	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.998	0.8407	0.8388	99.8	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.929	0.7834	0.7192	92.9	-7.1	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	1.05	0.5332	0.5734	105	4.9	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.874	1.024	0.8944	87.4	-12.6	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.01	0.487	0.3661	101	1.2	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.940	1.5755	1.4809	94.0	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.18	0.5309	0.6239	118	NA	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	0.860	0.3994	0.3435	86.0	NA	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.03	0.7548	0.8141	108	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.947	0.8987	0.8868	98.7	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	5.65	0.2109	0.2383	113	NA	±30	Average RF
18O2-PFHxS	5.00	5.71	0.1263	0.1443	114	NA	±30	Average RF
13C4-PFOS	5.00	5.29	0.1285	0.136	106	NA	±30	Average RF
13C4-PFBA	5.00	5.76	0.6222	0.7162	115	NA	±30	Average RF
13C5-PFPeA	5.00	5.88	0.3118	0.367	118	NA	±30	Average RF
13C2-PFHxA	5.00	5.43	1.0959	1.1911	109	NA	±30	Average RF
13C4-PFHpA	5.00	5.61	0.799	0.8968	112	NA	±30	Average RF
13C4-PFOA	5.00	5.12	1.2704	1.3008	102	NA	±30	Average RF
13C5-PFNA	5.00	4.97	0.8285	0.8228	99.3	NA	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:** 12/21/18 02:58

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Calibration Date:** 12/19/2018
File ID: J:\LCMS06\Data\122018_b3\122018_046 **Calibration ID:** KC1800576
Signal ID: 1 **Analysis Lot:** 619743
Units: ng/mL

13C2-PFDA	5.00	5.09	0.7605	0.7745	102	NA	±30	Average RF
13C2-PFUnDA	5.00	5.21	0.8696	0.9053	104	NA	±30	Average RF
13C2-PFDoDA	5.00	5.44	1.2514	1.362	109	NA	±30	Average RF
13C2-PFTeDA	5.00	6.18	0.9224	1.1397	124	NA	±30	Average RF
13C8-FOSA	5.00	5.65	0.3031	0.3426	113	NA	±30	Average RF
D3-MeFOSAA	5.00	8.72	0.1038	0.1811	174*	NA	±30	Average RF
D5-EtFOSAA	5.00	9.18	0.1078	0.198	184*	NA	±30	Average RF
13C2-6:2 FTS	5.00	2.89	0.1613	0.0934	57.9*	NA	±30	Average RF
13C2-8:2 FTS	5.00	3.06	0.1088	0.0666	61.3*	NA	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:** 01/05/19 11:03

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Calibration Date:** 1/4/2019
File ID: J:\LCMS06\Data\190104_b5\010419_119 **Calibration ID:** KC1900007
Signal ID: 1 **Analysis Lot:** 621097
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.915	1.0185	1.05	103	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.766	0.9633	0.8086	83.9	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.931	1.0078	0.9837	97.6	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.822	0.7373	0.652	88.4	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.874	0.9194	0.8327	90.6	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.02	0.8819	0.9033	102	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.953	3.4227	2.5286	95.3	-4.7	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.950	0.8903	0.8391	95.0	-5.0	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.811	1.0717	0.8666	81.1	-18.9	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	1.09	0.825	0.8937	109	9.0	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.959	0.6565	0.6365	95.9	-4.1	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.920	0.8371	0.7699	92.0	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.960	0.8111	0.7757	96.0	-4.0	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.995	0.5224	0.5397	99.5	-0.5	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.961	0.9063	0.8632	96.1	-3.9	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.04	0.4702	0.3534	104	3.9	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.927	1.3358	1.2382	92.7	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.10	0.5241	0.5765	110	NA	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.01	0.3977	0.4523	101	1.0	±30	Linear
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	1.08	0.9238	1.0491	114	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.908	0.8814	0.8337	94.6	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	4.83	0.2001	0.1931	96.5	NA	±30	Average RF
18O2-PFHxS	5.00	5.29	0.138	0.1459	106	NA	±30	Average RF
13C4-PFOS	5.00	4.99	0.1441	0.1438	99.8	NA	±30	Average RF
13C4-PFBA	5.00	4.60	0.6416	0.5906	92.1	NA	±30	Average RF
13C5-PFPeA	5.00	4.79	0.3575	0.3424	95.8	NA	±30	Average RF
13C2-PFHxA	5.00	4.74	1.1939	1.131	94.7	NA	±30	Average RF
13C4-PFHpA	5.00	5.02	0.8956	0.8993	100	NA	±30	Average RF
13C4-PFOA	5.00	4.19	1.1938	1.0007	83.8	NA	±30	Average RF
13C5-PFNA	5.00	4.90	0.9933	0.9733	98.0	NA	±30	Average RF

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	01/05/19 11:03

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method:	PFC/537M	**Calibration Date:**	1/4/2019
File ID:	J:\LCMS06\Data\190104_b5\010419_119	**Calibration ID:**	KC1900007
Signal ID:	1	**Analysis Lot:**	621097
		Units:	ng/mL

13C2-PFDA	5.00	5.05	0.8671	0.8757	101	NA	±30	Average RF
13C2-PFUnDA	5.00	4.82	0.8114	0.7817	96.4	NA	±30	Average RF
13C2-PFDoDA	5.00	4.65	1.1773	1.0954	93.0	NA	±30	Average RF
13C2-PFTeDA	5.00	5.06	0.8424	0.8517	101	NA	±30	Average RF
13C8-FOSA	5.00	4.68	0.3834	0.3585	93.5	NA	±30	Average RF
D3-MeFOSAA	5.00	4.68	0.1517	0.1421	93.7	NA	±30	Average RF
D5-EtFOSAA	5.00	5.00	0.1457	0.1456	100	NA	±30	Average RF
13C2-6:2 FTS	5.00	3.58	0.1242	0.0889	71.6	NA	±30	Average RF
13C2-8:2 FTS	5.00	4.16	0.0966	0.0804	83.3	NA	±30	Average RF

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160 **Date Analyzed:** 01/25/19 20:04

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Calibration Date:** 1/18/2019
File ID: J:\LCMS06\Data\190125_b6\190125_071 **Calibration ID:** KC1900021
Signal ID: 1 **Analysis Lot:** 623320
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.913	1.0059	1.0345	103	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.903	0.9933	0.9826	98.9	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.988	1.1964	1.2402	104	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.956	0.7158	0.7365	103	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.934	0.8628	0.8355	96.8	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.980	0.9944	0.9745	98.0	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.916	3.5778	2.5148	91.6	-8.4	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.997	0.9185	0.9216	99.7	-0.4	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.918	0.8995	0.8543	91.8	-8.2	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	1.09	0.8635	0.9297	109	9.4	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.954	0.6906	0.6718	95.4	-4.6	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.938	0.8449	0.7924	93.8	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.985	0.8285	0.8005	98.5	-1.5	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.952	0.5343	0.5135	95.2	-4.9	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	1.03	0.8545	0.8881	103	2.6	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.953	0.4929	0.356	95.3	-4.7	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.887	1.3389	1.187	88.7	NA	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.977	0.9891	1.0158	103	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.938	0.794	0.7754	97.7	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	5.29	0.1965	0.208	106	NA	±30	Average RF
18O2-PFHxS	5.00	5.72	0.1113	0.1274	114	NA	±30	Average RF
13C4-PFOS	5.00	6.03	0.1254	0.1513	121	NA	±30	Average RF
13C4-PFBA	5.00	5.69	0.5397	0.614	114	NA	±30	Average RF
13C5-PFPeA	5.00	5.39	0.3286	0.3541	108	NA	±30	Average RF
13C2-PFHxA	5.00	5.29	1.1181	1.1827	106	NA	±30	Average RF
13C4-PFHpA	5.00	5.43	0.9185	0.9971	109	NA	±30	Average RF
13C4-PFOA	5.00	5.60	1.0464	1.172	112	NA	±30	Average RF
13C5-PFNA	5.00	5.46	0.9025	0.9858	109	NA	±30	Average RF
13C2-PFDA	5.00	5.57	0.8362	0.9315	111	NA	±30	Average RF
13C2-PFUnDA	5.00	5.16	0.8133	0.8397	103	NA	±30	Average RF
13C2-PFDoDA	5.00	4.74	1.1117	1.0535	94.8	NA	±30	Average RF
13C2-PFTeDA	5.00	4.14	0.8757	0.7254	82.8	NA	±30	Average RF

Client:	AECOM	**Service Request:**	K1812302
Project:	E. Hampton Airport/60566160	**Date Analyzed:**	01/25/19 20:04

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method:	PFC/537M	**Calibration Date:**	1/18/2019
File ID:	J:\LCMS06\Data\190125_b6\190125_071	**Calibration ID:**	KC1900021
Signal ID:	1	**Analysis Lot:**	623320
		Units:	ng/mL

13C8-FOSA	5.00	5.46	0.348	0.3801	109	NA	±30	Average RF
13C2-6:2 FTS	5.00	6.45	0.0788	0.1016	129	NA	±30	Average RF
13C2-8:2 FTS	5.00	5.33	0.0621	0.0663	107	NA	±30	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AECOM **Service Request:**K1812302
Project: E. Hampton Airport/60566160

Analysis Run Log
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Analysis Lot:**619743
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\122018_b3\122018_046	Continuing Calibration Verification	KQ1818586-01	12/21/2018	02:58	
J:\LCMS06\Data\122018_b3\122018_047	Continuing Calibration Blank	KQ1818586-02	12/21/2018	03:08	
J:\LCMS06\Data\122018_b3\122018_048	Method Blank	KQ1818316-06	12/21/2018	03:19	
J:\LCMS06\Data\122018_b3\122018_049	Lab Control Sample	KQ1818316-05	12/21/2018	03:29	
J:\LCMS06\Data\122018_b3\122018_050	IDW(soil 1) 121418	K1812302-001	12/21/2018	03:40	
J:\LCMS06\Data\122018_b3\122018_051	IDW(soil 2) 121418	K1812302-002	12/21/2018	03:50	
J:\LCMS06\Data\122018_b3\122018_052	IDW(soil 2) 121418 MS	KQ1818316-01	12/21/2018	04:01	
J:\LCMS06\Data\122018_b3\122018_053	IDW(soil 2) 121418 DMS	KQ1818316-02	12/21/2018	04:11	

Client: AECOM **Service Request:**K1812302
Project: E. Hampton Airport/60566160

Analysis Run Log
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Analysis Lot:**621097
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190104_b5\010419_119	Continuing Calibration Verification	KQ1900180-01	1/5/2019	11:03	
J:\LCMS06\Data\190104_b5\010419_120	Continuing Calibration Blank	KQ1900180-02	1/5/2019	11:13	
J:\LCMS06\Data\190104_b5\010419_121	Method Blank	KQ1818747-04	1/5/2019	11:24	
J:\LCMS06\Data\190104_b5\010419_122	Lab Control Sample	KQ1818747-05	1/5/2019	11:34	
J:\LCMS06\Data\190104_b5\010419_123	Duplicate Lab Control Sample	KQ1818747-06	1/5/2019	11:45	
J:\LCMS06\Data\190104_b5\010419_124	ZZZZZZZ	ZZZZZZZ	1/5/2019	11:55	
J:\LCMS06\Data\190104_b5\010419_125	ZZZZZZZ	ZZZZZZZ	1/5/2019	12:06	
J:\LCMS06\Data\190104_b5\010419_126	ZZZZZZZ	ZZZZZZZ	1/5/2019	12:16	
J:\LCMS06\Data\190104_b5\010419_127	ZZZZZZZ	ZZZZZZZ	1/5/2019	12:27	
J:\LCMS06\Data\190104_b5\010419_128	Batch QC	R1812115-005	1/5/2019	12:37	
J:\LCMS06\Data\190104_b5\010419_129	Batch QC MS	KQ1818747-01	1/5/2019	12:48	
J:\LCMS06\Data\190104_b5\010419_130	Batch QC DMS	KQ1818747-02	1/5/2019	12:58	
J:\LCMS06\Data\190104_b5\010419_131	ZZZZZZZ	ZZZZZZZ	1/5/2019	13:08	
J:\LCMS06\Data\190104_b5\010419_132	ZZZZZZZ	ZZZZZZZ	1/5/2019	13:19	
J:\LCMS06\Data\190104_b5\010419_133	IDW(water) 121418	K1812302-003	1/5/2019	13:29	
J:\LCMS06\Data\190104_b5\010419_134	Terminal 121418	K1812302-004	1/5/2019	13:40	
J:\LCMS06\Data\190104_b5\010419_135	ZZZZZZZ	ZZZZZZZ	1/5/2019	13:50	
J:\LCMS06\Data\190104_b5\010419_136	ZZZZZZZ	ZZZZZZZ	1/5/2019	14:01	
J:\LCMS06\Data\190104_b5\010419_137	ZZZZZZZ	ZZZZZZZ	1/5/2019	14:11	

Client: AECOM **Service Request:**K1812302
Project: E. Hampton Airport/60566160

Analysis Run Log
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Analysis Lot:**623320
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190125_b6\190125_071	Continuing Calibration Verification	KQ1901091-01	1/25/2019	20:04	
J:\LCMS06\Data\190125_b6\190125_072	Continuing Calibration Blank	KQ1901091-02	1/25/2019	20:15	
J:\LCMS06\Data\190125_b6\190125_073	ZZZZZZZ	ZZZZZZZ	1/25/2019	20:25	
J:\LCMS06\Data\190125_b6\190125_074	ZZZZZZZ	ZZZZZZZ	1/25/2019	20:36	
J:\LCMS06\Data\190125_b6\190125_075	ZZZZZZZ	ZZZZZZZ	1/25/2019	20:46	
J:\LCMS06\Data\190125_b6\190125_076	ZZZZZZZ	ZZZZZZZ	1/25/2019	20:57	
J:\LCMS06\Data\190125_b6\190125_077	IDW(water) 121418	K1812302-003	1/25/2019	21:07	

Prep Summary Report

Client: AECOM **Service Request:** K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Soil

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Prep Method: EPA 3550B **Extraction Lot:** 328407
Analytical Method: PFC/537M **Extraction Date:** 12/17/18 09:31

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDW(soil 1) 121418	K1812302-001	12/14/18	12/15/18	1.078 g	8 mL	96.4
IDW(soil 2) 121418	K1812302-002	12/14/18	12/15/18	1.156 g	8 mL	95.2
Matrix Spike	KQ1818316-01MS	12/14/18	12/15/18	1.065 g	8 mL	95.2
Duplicate Matrix Spike	KQ1818316-02DMS	12/14/18	12/15/18	1.073 g	8 mL	95.2
Lab Control Sample	KQ1818316-05LCS	NA	NA	1 g	8 mL	
Method Blank	KQ1818316-06MB	NA	NA	1 g	8 mL	

Prep Summary Report

Client: AECOM **Service Request:**K1812302
Project: E. Hampton Airport/60566160
Sample Matrix: Water

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Prep Method: EPA 3535A **Extraction Lot:** 328931
Analytical Method: PFC/537M **Extraction Date:** 12/27/18 08:51

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
IDW(water) 121418	K1812302-003	12/14/18	12/15/18	300.0000 mL	8 mL	
Terminal 121418	K1812302-004	12/14/18	12/15/18	305.0000 mL	8 mL	
Matrix Spike	KQ1818747-01MS	NA	NA	310.0000 mL	8 mL	
Duplicate Matrix Spike	KQ1818747-02DMS	NA	NA	310.0000 mL	8 mL	
Method Blank	KQ1818747-04MB	NA	NA	250 mL	8 mL	
Lab Control Sample	KQ1818747-05LCS	NA	NA	250 mL	8 mL	
Duplicate Lab Control Sample	KQ1818747-06DLCS	NA	NA	250 mL	8 mL	
Batch QC	R1812115-005	NA	NA	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

Total Solids

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

Benchsheet

Service Request #: K1812302, KQ1818309
Test: TS
Method: 160.3 Modified
Run #: 619030
Balance ID: K-BALANCE-50

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Soil	K1812302-001	1.268	13.438	14.221	13.0	96.4	
Soil	K1812302-002	1.273	11.325	12.057	10.8	95.2	
Soil	K1812302-002DUP	1.273	11.322	12.179	10.9	96.3	1

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	K-Oven-07	105	105	12/17/2018	16:22	12/18/2018	07:30	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-BALANCE-50	1.000, 99.999	1.000, 99.999	12/17/2018	09:17	12/17/2018	16:22
Calibration2	K-BALANCE-50	0.999, 99.998	0.999, 99.998	12/18/2018	08:30	12/18/2018	08:31

Comments: DJM SN 42868. Reviewed by SC 12/18/18

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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#: 328407
Team: Organic LC/NHILLIKER
Number of Copies to make: 1

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3550B

Status: Prepped
Prep Date/Time: 12/17/18 09:31 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1812302-001	IDW(soil 1) 121418	.01	PFC/537M/PFOA		Soil	1.078g	8.00mL	DMADDEN K-Balance-50
2	K1812302-002	IDW(soil 2) 121418	.01	PFC/537M/PFOA		Soil	1.156g	8.00mL	DMADDEN K-Balance-50
3	KQ1818316-01	K1812302-002 MS	.01	PFC/537M/PFOA		Solid	1.065g	8.00mL	DMADDEN K-Balance-50
4	KQ1818316-02	K1812302-002 DMS	.01	PFC/537M/PFOA		Solid	1.073g	8.00mL	DMADDEN K-Balance-50
5	KQ1818316-03	MDL		PFC/537M/PFOA		Solid	1g	8.00mL	
6	KQ1818316-04	MDL		PFC/537M/PFOA		Solid	1g	8.00mL	
7	KQ1818316-05	LCS		PFC/537M/PFOA		Solid	1g	8.00mL	
8	KQ1818316-06	MB		PFC/537M/PFOA		Solid	1g	8.00mL	

Spiking Solutions

Name: PFC isotopes 2ppm DOD Inventory ID 195420 Logbook Ref: 18-OLC-02-45A Expires On: 06/05/2019

K1812302-001 20.00µL K1812302-002 20.00µL KQ1818316-01 20.00µL KQ1818316-02 20.00µL KQ1818316-03 20.00µL KQ1818316-04 20.00µL
KQ1818316-05 20.00µL KQ1818316-06 20.00µL

Name: PFC Targets 200ppb Inventory ID 195421 Logbook Ref: 18-OLC-02-45B Expires On: 03/12/2019

KQ1818316-01 40.00µL KQ1818316-02 40.00µL KQ1818316-05 40.00µL

Name: PFC IS Inventory ID 195547 Logbook Ref: 18-OLC-02-45F Expires On: 06/06/2019

K1812302-001 10.00µL K1812302-002 10.00µL KQ1818316-01 10.00µL KQ1818316-02 10.00µL KQ1818316-03 10.00µL KQ1818316-04 10.00µL
KQ1818316-05 10.00µL KQ1818316-06 10.00µL

Name: PFC isotopes 2ppm Inventory ID 195593 Logbook Ref: 18-OLC-02-46G Expires On: 12/04/2023

K1812302-001 20.00µL K1812302-002 20.00µL KQ1818316-01 20.00µL KQ1818316-02 20.00µL KQ1818316-03 20.00µL KQ1818316-04 20.00µL
KQ1818316-05 20.00µL KQ1818316-06 20.00µL

Name: PFC Targets 10ppb mix Inventory ID 195678 Logbook Ref: 18-OLC-02-54S Expires On: 03/12/2019

KQ1818316-03 20.00µL KQ1818316-04 40.00µL

Prep Run#: 328407
Team: Organic LC/NHILLIKER

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3550B

Status: Prepped
Prep Date/Time: 12/17/18 09:31 AM

Preparation Steps

Step:	Weigh	Step:	Extraction	Step:	Final Volume
Started:	12/17/18 09:31	Started:	12/18/18 10:44	Started:	12/18/18 14:00
Finished:	12/18/18 09:26	Finished:	12/18/18 14:00	Finished:	12/19/18 14:45
By:	NHILLIKER	By:	NHILLIKER	By:	NHILLIKER
Comments		Comments		Comments	

Comments: _____

Reviewed By: cmiller Date: 1/14/19

Chain of Custody

Relinquished By: Noahhilliker Date: 12/19/18

Received By: cmiller Date: 12/20/18

Extracts Examined
(Yes) No

Preparation Information Benchsheet

Prep Run#: 328407
Team: Organic LC/NHILLIKER
Number of Copies to make: 1

Prep WorkFlow: OrgExtS(14)
Prep Method: EPA 3550B

Status: Extraction
Prep Date/Time: 12/17/18 09:31 AM

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt (µL)	Spike Amt (µL)
1	**K1812302-001**	IDW(soil 1) 121418	.01	N/A	PFC/537M / PFOA	Soil	see sheet	N/A	N/A	8 mL	20/20	N/A
2	**K1812302-002**	IDW(soil 2) 121418	.01		PFC/537M / PFOA	Soil	↓	↓	↓	↓	↓	↓
3	**KQ1818316-01**	K1812302-002 MS	.01		PFC/537M / PFOA	Solid						40 (A)
4	**KQ1818316-02**	K1812302-002 DMS	.01		PFC/537M / PFOA	Solid	↓					↓
5	**KQ1818316-03**	MDL 20/10 ppb			PFC/537M / PFOA	Solid	1.0 g					20 (B)
6	**KQ1818316-04**	MDL 40/10 ppb			PFC/537M / PFOA	Solid						40 (B)
7	**KQ1818316-05**	LCS			PFC/537M / PFOA	Solid						40 (A)
8	**KQ1818316-06**	MB		/	PFC/537M / PFOA	Solid	↓	↓	↓	↓	↓	N/A

* CM
1/14/19

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Comments:

Surrogate ID: √well: 18-OLC-02-46G 20µL/2ppm xp: 12/4/23
√ext: 18-OLC-02-45A 20µL/2ppm xp: 6/5/19

Spike ID: √(A) 18-OLC-02-45B xp: 3/12/19
√(B) 18-OLC-02-54S xp: 3/12/19

Witnessed By:

Analyst: Noah Hilliker

Assisted By:

Pre-Prep Information Benchsheet

Prep Run #: 328407 **Prep Method:** **Team:** **Container Lot No:** p7217221 **Prep Due Date:** Jan-02-2019

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1812302-001	.01	PFOA	1.078g		PrepComments:DMADDEN K-Balance-50
2	K1812302-002	.01	PFOA	1.156g		PrepComments:DMADDEN K-Balance-50
3	K1812302-002 MS KQ1818316-01	.01	PFOA	1.065g		PrepComments:DMADDEN K-Balance-50
4	K1812302-002 DMS KQ1818316-02	.01	PFOA	1.073g		PrepComments:DMADDEN K-Balance-50

Relinquished By:	Date/Time: 12.17.18 0932	Received By:	Date/Time: 12/18/18

Sample ID	Sample Amount (g)	Solids (%)	Water in Sample (mL)	MeOH to Add (mL)
K1812302-001	1.078	96.4	0.039	8.0
K1812302-002	1.156	95.2	0.055	7.9
K1812302-002 MS	1.065	95.2	0.051	7.9
K1812302-002 DMS	1.073	95.2	0.052	7.9

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

Soil/Paperboard

Service Request K1812302/MDL x2 **Workgroup** KQ1818316

1% Acetic Acid/MeOH Lot # 18-OLC-02-25B

Sonication Start (Time/Date/Initial): 10:44 am 12/18/18 NH

Sonication Stop (Time/Date/Initial): 2:00 pm 12/18/18 NH

NH4OH lot #: H2020

Envi-Carb lot #: 106547

IS (or IS/MeOH solution) Lot #: 18-OLC-02-45F

0.20 µm Nylon Filter Lot#: 81412103 / FE154

Extract Storage: Purple rack 4

Completed(Time/Date/Initial): 2:45pm 12/19/18 NH

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

Preparation Information Benchsheet

Prep Run#: 328931 **Prep WorkFlow:** OrgExtAq(14) **Status:** Prepped
Team: Organic LC/NHILLIKER **Prep Method:** EPA 3535A **Prep Date/Time:** 12/27/18 08:51 AM
Number of Copies to make: 3

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	R1812115-001	MW-05	.01	PFC/537M/PFOA		Water	310.0000mL	8.00mL	
2	R1812115-002	Field Blank	.01	PFC/537M/PFOA		Water	295.0000mL	8.00mL	
3	R1812115-003	MW-06	.01	PFC/537M/PFOA		Water	305.0000mL	8.00mL	
4	R1812115-004	MW-02	.01	PFC/537M/PFOA		Water	310.0000mL	8.00mL	
5	R1812115-005	MW-03	.01	PFC/537M/PFOA		Water	305.0000mL	8.00mL	
6	R1812115-006	MW-04	.01	PFC/537M/PFOA		Water	290.0000mL	8.00mL	
7	R1812115-007	Dupe	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
8	K1812302-003	IDW(water) 121418	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
9	K1812302-004	Terminal 121418	.01	PFC/537M/PFOA		Water	305.0000mL	8.00mL	
10	K1812308-001	Effluent - Grab	.01	PFC/537M/PFOA		Water	305.0000mL	8.00mL	
11	K1812308-002	Downstream	.01	PFC/537M/PFOA		Water	305.0000mL	8.00mL	
12	K1812308-003	Upstream	.01	PFC/537M/PFOA		Water	315.0000mL	8.00mL	
13	KQ1818747-01	R1812115-005 MS	.02	PFC/537M/PFOA		Liquid	310.0000mL	8.00mL	
14	KQ1818747-02	R1812115-005 DMS	.03	PFC/537M/PFOA		Liquid	310.0000mL	8.00mL	
15	KQ1818747-05	LCS *		PFC/537M/PFOA		Liquid	250mL	8.00mL	
16	KQ1818747-06	DLCS **		PFC/537M/PFOA		Liquid	250mL	8.00mL	
17	KQ1818747-04	MB		PFC/537M/PFOA		Liquid	250mL	8.00mL	

Spiking Solutions

Name: PFC Targets 200ppb Inventory ID 195421 Logbook Ref: 18-OLC-02-45B Expires On: 03/12/2019

KQ1818747-01	40.00µL	KQ1818747-02	40.00µL	KQ1818747-05	40.00µL	KQ1818747-06	40.00µL

Name: PFC IS Inventory ID 195547 Logbook Ref: 18-OLC-02-45F Expires On: 06/06/2019

K1812302-003	10.00µL	K1812302-004	10.00µL	K1812308-001	10.00µL	K1812308-002	10.00µL	K1812308-003	10.00µL	KQ1818747-01	10.00µL
KQ1818747-02	10.00µL	KQ1818747-04	10.00µL	KQ1818747-05	10.00µL	KQ1818747-06	10.00µL	R1812115-001	10.00µL	R1812115-002	10.00µL
R1812115-003	10.00µL	R1812115-004	10.00µL	R1812115-005	10.00µL	R1812115-006	10.00µL	R1812115-007	10.00µL		

Name: PFC isotopes 2ppm Inventory ID 195593 Logbook Ref: 18-OLC-02-46G Expires On: 12/04/2023

K1812302-003	20.00µL	K1812302-004	20.00µL	K1812308-001	20.00µL	K1812308-002	20.00µL	K1812308-003	20.00µL	KQ1818747-01	20.00µL
KQ1818747-02	20.00µL	KQ1818747-04	20.00µL	KQ1818747-05	20.00µL	KQ1818747-06	20.00µL	R1812115-001	20.00µL	R1812115-002	20.00µL
R1812115-003	20.00µL	R1812115-004	20.00µL	R1812115-005	20.00µL	R1812115-006	20.00µL	R1812115-007	20.00µL		

Name: PFC isotopes 2ppm DOD Inventory ID 195940 Logbook Ref: 18-OLC-02-60N Expires On: 06/27/2019

* LCS formaly known as KQ1818747-3

** DLCS also known as

Preparation Information Benchsheet

Prep Run#: 328931 **Prep WorkFlow:** OrgExtAq(14) **Status:** Prepped
Team: Organic LC/NHILLIKER **Prep Method:** EPA 3535A **Prep Date/Time:** 12/27/18 08:51 AM

K1812302-003	20.00µL	K1812302-004	20.00µL	K1812308-001	20.00µL	K1812308-002	20.00µL	K1812308-003	20.00µL	KQ1818747-01	20.00µL
KQ1818747-02	20.00µL	KQ1818747-04	20.00µL	KQ1818747-05	20.00µL	KQ1818747-06	20.00µL	R1812115-001	20.00µL	R1812115-002	20.00µL
R1812115-003	20.00µL	R1812115-004	20.00µL	R1812115-005	20.00µL	R1812115-006	20.00µL	R1812115-007	20.00µL		

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	12/27/18 08:51	Started:	12/27/18 19:43
Finished:	12/27/18 19:43	Finished:	12/28/18 12:14
By:	NHILLIKER	By:	NHILLIKER
Comments		Comments	

Comments:

Reviewed By: cmuller Date: 1/1/18/19

Chain of Custody

Relinquished By: Noah Hilliker Date: 12/27/18

Received By: C Muller Date: 1/4/19

Extracts Examined
Yes No

Preparation Information Benchsheet

Prep Run#: 328931 **Prep WorkFlow:** OrgExtAq(14) **Status:** Draft
Team: Organic LC/NHILLIKER **Prep Method:** EPA 3535A **Prep Date/Time:** 12/27/18 08:51 AM
Number of Copies to make: 3

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. (mL)	pH	Int. Vol	Final Vol	Surr Amt (µL)	Spike Amt (µL)
1	**R1812115-001**	MW-05	.01	✓	PFC/537M / PFOA	Water	310	3.5	N/A	8 mL	20/20	N/A
2	**R1812115-002**	Field Blank	.01	✓	PFC/537M / PFOA	Water	295					
*3	**R1812115-003**	MW-06	.01	✓	PFC/537M / PFOA	Water	305					
*4	**R1812115-004**	MW-02	.01	✓	PFC/537M / PFOA	Water	310					
5	**R1812115-005**	MW-03	.01	✓	PFC/537M / PFOA	Water	305					
*6	**R1812115-006**	MW-04	.01	✓	PFC/537M / PFOA	Water	290					
7	**R1812115-007**	Dupe	.01	✓	PFC/537M / PFOA	Water	300					
8	**K1812302-003**	IDW(water) 121418	.01	✓	PFC/537M / PFOA	Water	300					
9	**K1812302-004**	Terminal 121418	.01	✓	PFC/537M / PFOA	Water	305					
10	**K1812308-001**	Effluent - Grab	.01	✓	PFC/537M / PFOA	Water	305					
11	**K1812308-002**	Downstream	.01	✓	PFC/537M / PFOA	Water	305					
12	**K1812308-003**	Upstream	.01	✓	PFC/537M / PFOA	Water	315					
*13	**KQ1818747-01**	R1812115-005 MS	.02	✓	PFC/537M / PFOA	Liquid	310					40
*14	**KQ1818747-02**	R1812115-005 DMS	.03	✓	PFC/537M / PFOA	Liquid	310					
15	**KQ1818747-03**	LCS	—	—	PFC/537M / PFOA	Liquid	250					
16	**KQ1818747-04**	MB	—	—	PFC/537M / PFOA	Liquid	250					N/A

* Significant sediment / Suspended solids present.

Comments: Prepped concurrently with prep run #328930 (K1812421)

Surrogate ID: √well: 18-OLC-02-46G 20µL/2ppm xp: 12/4/23
√ext: 18-OLC-02-60N 20µL/2ppm xp: 6/27/19

Spike ID: √18-OLC-02-45B 40µL/200ppb xp: 3/12/19

Witnessed By:

Analyst: Noah Hilliker

Assisted By: K. Petersen

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

Waters

Service Request ~~IC1812421~~ NH IC1812302/12308/R12115 **Workgroup** ICQ1818747

6cc 200mg Strata XL-AW Cartridge Sorbent Lot # S322-0023

Envi-Carb Lot # N/A

0.1% NH_4OH in MeOH Lot# ~~DV~~ NH 18-OLC-02-41C MeOH Lot# DV242-US

Reagent Water Lot# 58201

Acetic Acid (LCMS Grade) Lot# SHBH2391V

25% NH_4OH Lot# N/A

Extraction (Manifold) Start (Time/Date/Initial): 4:03pm 12/27/18 NH

Extraction (Manifold) Stop (Time/Date/Initial): 7:43pm 12/27/18 NH

IS solution (13C7-PFUnDA 500ppb) Lot #: 18-OLC-02-45F

13mm ~~0.2µm~~ 0.45µm Nylon Filter Lot#: 81412103

Extract Storage: Dude

Completed(Time/Date/Initial): 12:14 pm 12/28/18 NH

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

1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_050
Lab ID: K1812302-001
RunType: N/A
Matrix: Soil

Date Acquired: 12/21/18 03:40
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D5-EtFOSAA	184	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D3-MeFOSAA	174	70	130	Native ok
	13C2-6:2 FTS	58	70	130	Native ok
Lab Control Sample Recovery	D3-MeFOSAA	158	20	154	Native ok
	D5-EtFOSAA	161	29	153	Native ok
Method Blank Surrogates	D5-EtFOSAA	156	29	153	High Bias ND
Surrogates	D3-MeFOSAA	159	20	154	High Bias ND
	D5-EtFOSAA	162	29	153	High Bias ND

Primary Review: _____

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Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_050	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:40	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-001	**Raw Units:**	ng/mL

Bottle ID:	K1812302-001.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**	328407	**Report Group:**	K1812302
Analysis	PFC/537M	**Prep Method:**	EPA 3550B		
		Prep Date:	12/17/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.061	+0.00	6302301	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.970	+0.00	1070406	4.0268	81		33 - 109	Y
18O2-PFHxS	4.357	0.00	694015	4.3600	87		36 - 120	Y
13C4-PFOS	4.681	0.00	702501	4.3358	87		32 - 130	Y
13C4-PFBA	3.296	-0.02	3502563	4.4658	89		34 - 116	Y
13C5-PFPeA	3.914		2106952	5.3613	107		39 - 133	Y
13C2-PFHxA	4.178		6637284	4.8048	96		32 - 136	Y
13C4-PFHpA	4.356	0.00	4787847	4.7538	95		36 - 133	Y
13C4-PFOA	4.527		6807322	4.2511	85		31 - 134	Y
13C5-PFNA	4.695		4415037	4.2278	85		27 - 133	Y
13C2-PFDA	4.879	+0.00	4155865	4.3354	87		30 - 137	Y
13C2-PFUnDA	5.061	+0.00	4910464	4.4798	90		32 - 146	Y
13C2-PFDoDA	5.240	+0.00	7212257	4.5725	91		36 - 136	Y
13C2-PFTeDA	5.563		6598727	5.6754	114		39 - 138	Y
13C8-FOSA	5.218	+0.00	1864357	4.8804	98		40 - 132	Y
D3-MeFOSAA	4.984	+0.00	1040128	7.9476	159	*	20 - 154	Y
D5-EtFOSAA	5.079		1103285	8.1170	162	*	29 - 153	Y
13C2-6:2 FTS	4.518		547452	2.6930	54		30 - 140	Y
13C2-8:2 FTS	4.876	0.00	402717	2.9374	59		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.349	-0.01	2054	0.0143	0.11	U	Y

1st CM 01/14/19

2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_050	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:40	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-001	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

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)	4.666	-0.02	680	0.0069	0.053	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.304	-0.01	2786	0.0047	0.036	U	Y
Perfluoropentanoic acid (PFPeA)	3.914		89083	-0.0064	0	U	Y
Perfluorohexanoic acid (PFHxA)	4.183	+0.01	12753	0.0099	0.076	U	Y
Perfluoroheptanoic acid (PFHpA)	4.366	+0.01	8713	0.0084	0.065	U	Y
Perfluorooctanoic acid (PFOA)	4.524	0.00	14421	0.0140	0.11	U	Y
Perfluorononanoic acid (PFNA)	4.712	+0.02	2520	-0.0011	0	U	Y
Perfluorodecanoic acid (PFDA)	4.879	+0.00	2598	0.0037	0.028	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.062	+0.00	8439	0.0078	0.060	U	Y
Perfluorododecanoic acid (PFDoDA)	5.246	+0.01	2029	0.0093	0.072	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.410	+0.00	956	0.0006	0.0046	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.563		51054	0.0174	0.13	U	Y
Perfluorooctane sulfonamide (FOSA)	5.217	+0.00	576	0.0010	0.0077	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.966	-0.02	194	0.0018	0.014	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.531	+0.01	259	0.0031	0.024	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.878	+0.00	49	0.0007	0.0054	U	Y

Prep Amount:	1.078 g	**Dilution:**	1
Prep Final Amount:	8.00 mL	**Basis Factor:**	96.40

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 1/14/2019 12:39:49 PM

122018_050

Sample ID: K1812302-001
Date acquired: 12/21/2018 3:40:12 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_050.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.296	3502563	3502563	2	5.0000	ng/mL	----
PFBA-13C	M	3.296	3502563	6302301	26	4.4658	ng/mL	----
PFBA	M	3.304	2786	3502563	2	0.0047	ng/mL	----
PFPeA-13C_IS	Auto	3.914	2106952	2106952	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.914	2106952	6302301	26	5.3613	ng/mL	----
PFPeA	Auto	3.914	89083	2106952	4	-0.0064	ng/mL	----
PFBS_1	ND(W/B)	----	----	1070406	16	----	ng/mL	----
PFBS-13C	Auto	3.970	1070406	6302301	26	4.0268	ng/mL	----
PFBS-13C_IS	Auto	3.970	1070406	1070406	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.178	6637284	6637284	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.178	6637284	6302301	26	4.8048	ng/mL	----
PFHxA	M	4.183	12753	6637284	6	0.0099	ng/mL	----
PFHpA	M	4.366	8713	4787847	8	0.0084	ng/mL	----
PFHpA-13C_IS	Auto	4.356	4787847	4787847	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.356	4787847	6302301	26	4.7538	ng/mL	----
PFHxS-18O_IS	Auto	4.357	694015	694015	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.357	694015	6302301	26	4.3600	ng/mL	----
PFHxS_1	Auto	4.349	2054	694015	7	0.0143	ng/mL	----
6_2-FTS-13C	Auto	4.518	547452	6302301	26	2.6930	ng/mL	----
6_2-FTS-13C_IS	Auto	4.518	547452	547452	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.531	259	547452	10	0.0031	ng/mL	----
PFHpS_1	ND(W/B)	----	----	694015	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.527	6807322	6807322	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.527	6807322	6302301	26	4.2511	ng/mL	----
PFOA	Auto	4.524	14421	6807322	9	0.0140	ng/mL	----
PFOS_1	Auto	4.666	680	702501	13	0.0069	ng/mL	----
PFOS-13C_IS	Auto	4.681	702501	702501	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.681	702501	6302301	26	4.3358	ng/mL	----
PFNA-13C_IS	Auto	4.695	4415037	4415037	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.695	4415037	6302301	26	4.2278	ng/mL	----
PFNA	M	4.712	2520	4415037	11	-0.0011	ng/mL	----
PFDA-13C_IS	Auto	4.879	4155865	4155865	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.879	4155865	6302301	26	4.3354	ng/mL	----
PFDA	Auto	4.879	2598	4155865	12	0.0037	ng/mL	----
8_2-FTS-13C_IS	Auto	4.876	402717	402717	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.876	402717	6302301	26	2.9374	ng/mL	----
8_2-FTS_1	M	4.878	49	402717	15	0.0007	ng/mL	----
PFDS_1	ND(W/B)	----	----	702501	13	----	ng/mL	----
PFUnA	M	5.062	8439	4910464	14	0.0078	ng/mL	----
PFUnA-13C_IS	Auto	5.061	4910464	4910464	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.061	4910464	6302301	26	4.4798	ng/mL	----
PFDoA	Auto	5.246	2029	7212257	17	0.0093	ng/mL	----
PFDoA-13C	Auto	5.240	7212257	6302301	26	4.5725	ng/mL	----
PFDoA-13C_IS	Auto	5.240	7212257	7212257	17	5.0000	ng/mL	----
PFTrDA	M	5.410	956	6598727	22	0.0006	ng/mL	----
PFTeDA	Auto	5.563	51054	6598727	22	0.0174	ng/mL	----
PFTeDA-13C	Auto	5.563	6598727	6302301	26	5.6754	ng/mL	----
PFTeDA-13C_IS	Auto	5.563	6598727	6598727	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.218	1864357	1864357	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.218	1864357	6302301	26	4.8804	ng/mL	----
FOSA	M	5.217	576	1864357	18	0.0010	ng/mL	----
N-MeFOSAA	Auto	4.966	194	1040128	19	0.0018	ng/mL	----
N-MeFOSAA-d3	Auto	4.984	1040128	6302301	26	7.9476	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.984	1040128	1040128	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	1103285	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.079	1103285	1103285	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.079	1103285	6302301	26	8.1170	ng/mL	----
13C7-PFUnDA_IS	Auto	5.061	6302301	6302301	26	5.0000	ng/mL	----

Insight Report

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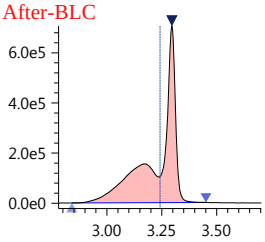
PFBA-13C_IS
Conc 5.0000
RT 3.296 Area 3502563
ISTD 216.90>172.15 (-) 7.07e5
After-BLC



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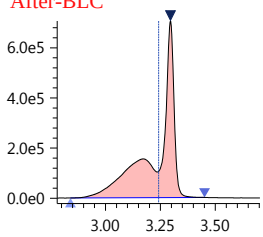
Conc 4.4658
RT 3.296 Area 3502563
Q 216.90>172.15 (-) 7.07e5
After-BLC



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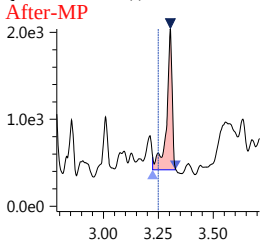
Conc 0.0047
RT 3.304 Area 2786
Q 213.00>169.10 (-) 2.04e3
After-MP



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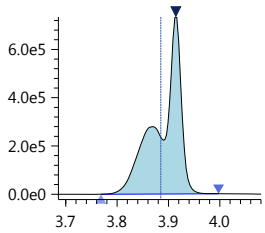
Conc 5.0000
RT 3.914 Area 2106952
ISTD 267.90>223.00 (-) 7.34e5



PFPeA-13C
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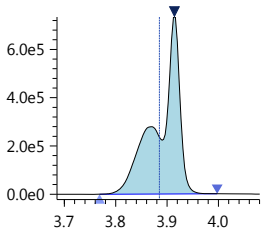
Q 267.90>223.00 (-) 7.34e5



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Conc -0.0064
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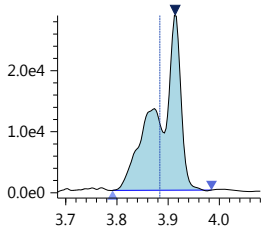
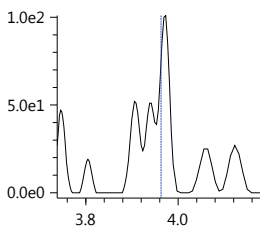
Q 263.05>219.10 (-) 2.90e4



PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 1.01e2



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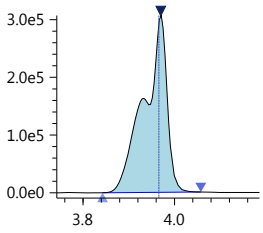
RT 3.970 Area 1070406
Q 301.80>80.00 (-) 3.07e5



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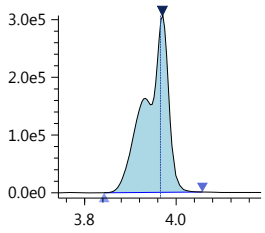

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Conc 5.0000
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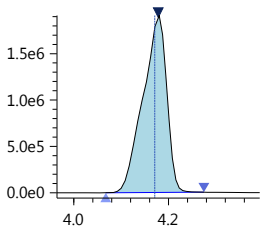
ISTD 314.90>270.10 (-) 1.91e6



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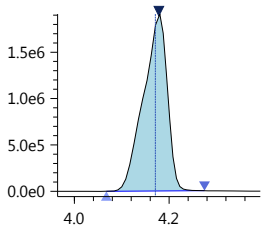

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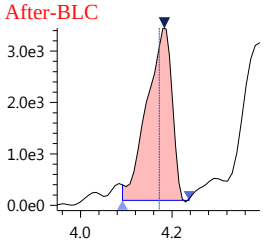
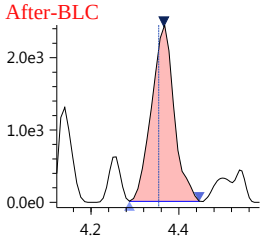
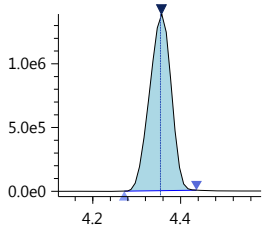
Conc 0.0099
RT 4.183 Area 12753
Q 313.00>269.00 (-) 3.45e3
After-BLC



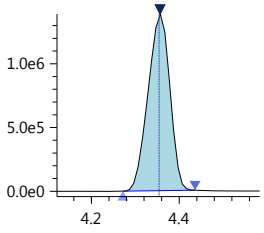
PFHpA
Conc 0.0084
RT 4.366 Area 8713
Q 362.90>319.00 (-) 2.45e3
After-BLC



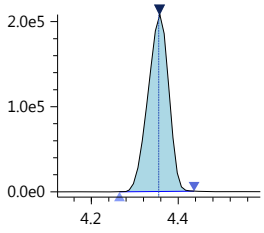
PFHpA-13C_IS
Conc 5.0000
RT 4.356 Area 4787847
ISTD 366.90>322.10 (-) 1.39e6



PFHpA-13C
Conc 4.7538
RT 4.356 Area 4787847
Q 366.90>322.10 (-) 1.39e6



PFHxS-18O_IS
Conc 5.0000
RT 4.357 Area 694015
ISTD 402.70>84.05 (-) 2.08e5



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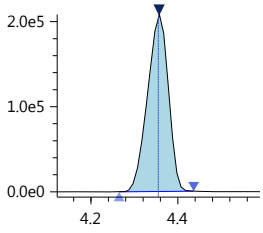
Conc 4.3600
RT 4.357 Area 694015
Q 402.70>84.05 (-) 2.08e5



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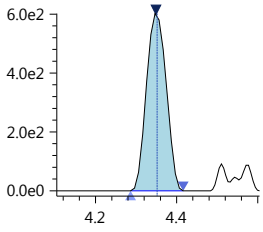
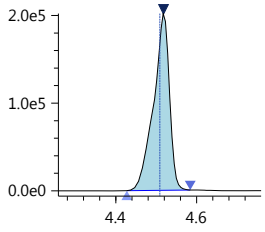
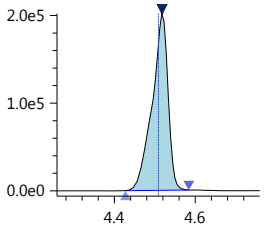
Conc 0.0143
RT 4.349 Area 2054
Q 399.00>80.00 (-) 6.02e2



6_2-FTS-13C
Conc 2.6930
RT 4.518 Area 547452
Q 428.90>409.00 (-) 2.02e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.518 Area 547452
ISTD 428.90>409.00 (-) 2.02e5



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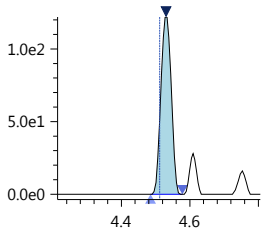
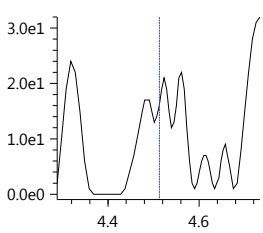
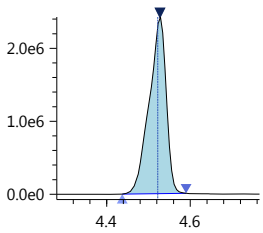
6_2-FTS_1
Conc 0.0031
RT 4.531 Area 259
Q 427.00>407.00 (-) 1.22e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.20e1



PFOA-13C_IS
Conc 5.0000
RT 4.527 Area 6807322
ISTD 416.80>372.05 (-) 2.43e6



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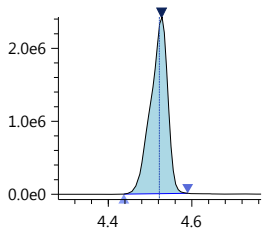
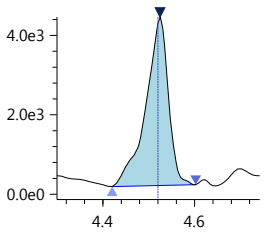
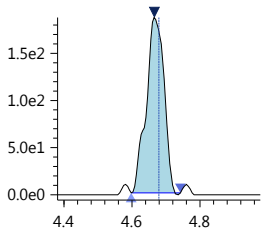
Q 416.80>372.05 (-) 2.43e6



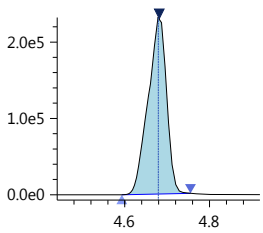
PFOA
Conc 0.0140
RT 4.524 Area 14421
Q 413.00>369.00 (-) 4.46e3



PFOS_1
Conc 0.0069
RT 4.666 Area 680
Q 499.00>80.00 (-) 1.88e2



PFOS-13C_IS
Conc 5.0000
RT 4.681 Area 702501
ISTD 502.80>80.05 (-) 2.32e5



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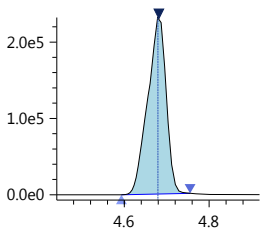
Conc 4.3358
RT 4.681 Area 702501
Q 502.80>80.05 (-) 2.32e5



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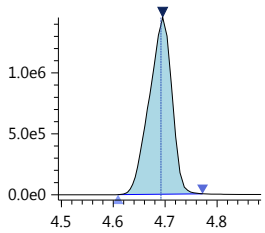
Conc 5.0000
RT 4.695 Area 4415037
ISTD 467.80>423.00 (-) 1.45e6



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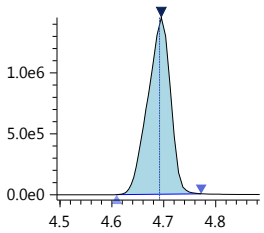
RT 4.695 Area 4415037
Q 467.80>423.00 (-) 1.45e6



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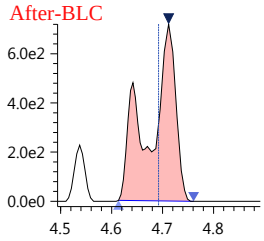
Conc -0.0011
RT 4.712 Area 2520
Q 463.00>418.90 (-) 7.21e2



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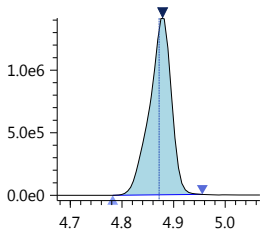
RT 4.879 Area 4155865
ISTD 514.80>469.95 (-) 1.42e6



PFDA-13C
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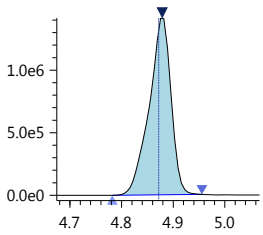
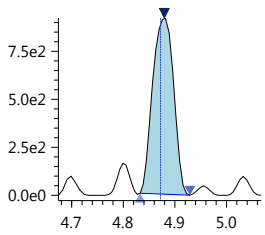
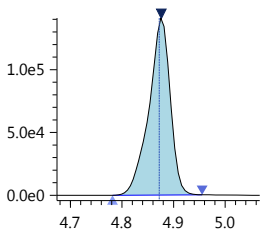


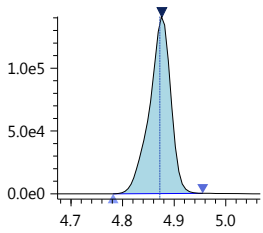
PFDA
Conc 0.0037
RT 4.879 Area 2598
Q 513.00>468.80 (-) 9.23e2



8_2-FTS-13C_IS
Conc 5.0000
RT 4.876 Area 402717
ISTD 528.80>509.00 (-) 1.41e5



8_2-FTS-13C
Conc 2.9374
RT 4.876 Area 402717
Q 528.80>509.00 (-) 1.41e5



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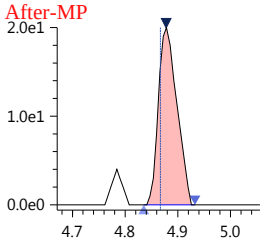
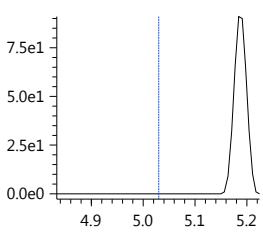
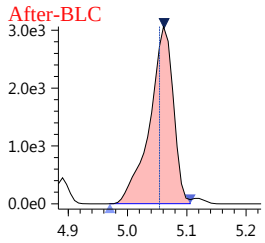
RT 4.878 Area 49
Q 527.10>506.90 (-) 2.00e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 9.10e1



PFUnA
Conc 0.0078
RT 5.062 Area 8439
Q 563.00>518.90 (-) 3.06e3



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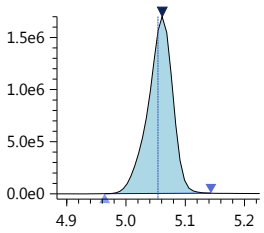
Conc 5.0000
RT 5.061 Area 4910464
ISTD 564.80>519.95 (-) 1.70e6



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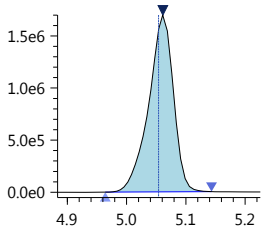
PFUnA-13C
Conc 4.4798
RT 5.061 Area 4910464
Q 564.80>519.95 (-) 1.70e6



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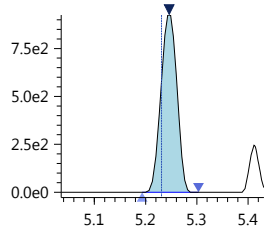
Conc 0.0093
RT 5.246 Area 2029
Q 613.05>569.00 (-) 9.25e2



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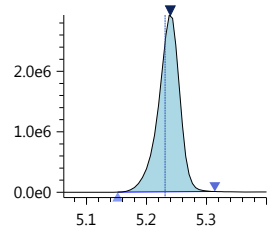
Conc 4.5725
RT 5.240 Area 7212257
Q 614.80>569.95 (-) 2.93e6



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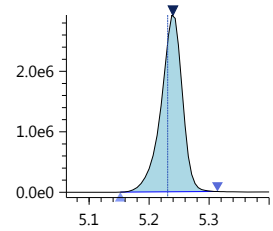
Conc 5.0000
RT 5.240 Area 7212257
ISTD 614.80>569.95 (-) 2.93e6



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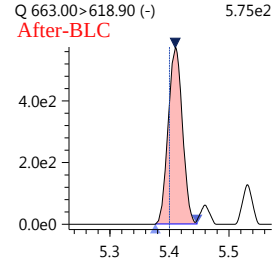
Conc 0.0006
RT 5.410 Area 956
Q 663.00>618.90 (-) 5.75e2



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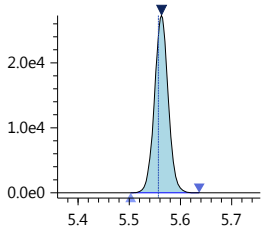
Conc 0.0174
RT 5.563 Area 51054
Q 713.40>669.00 (-) 2.73e4



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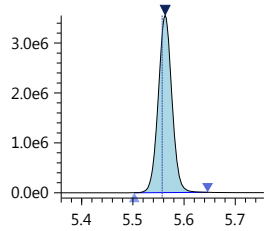
Conc 5.6754
RT 5.563 Area 6598727
Q 714.70>669.90 (-) 3.55e6



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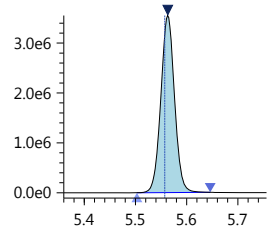
Conc 5.0000
RT 5.563 Area 6598727
ISTD 714.70>669.90 (-) 3.55e6



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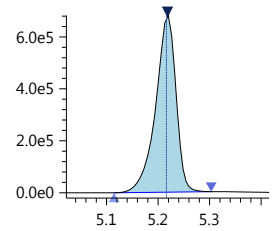
Conc 5.0000
RT 5.218 Area 1864357
ISTD 506.00>78.05 (-) 6.82e5



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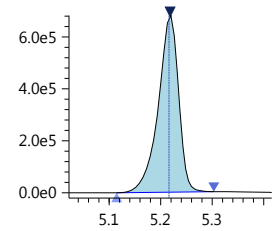

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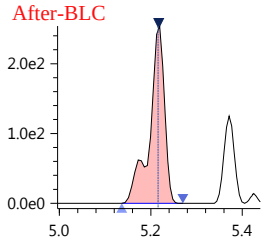
Q 498.20>78.00 (-) 2.54e2



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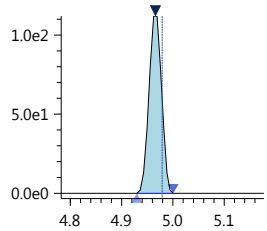
Conc 0.0018
RT 4.966 Area 194
Q 570.20>419.00 (-) 1.12e2



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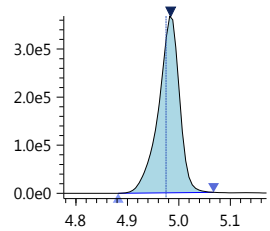
Conc 7.9476
RT 4.984 Area 1040128
Q 572.80>419.05 (-) 3.69e5



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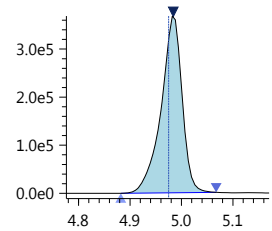
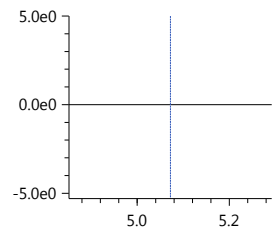
RT 4.984 Area 1040128
ISTD 572.80>419.05 (-) 3.69e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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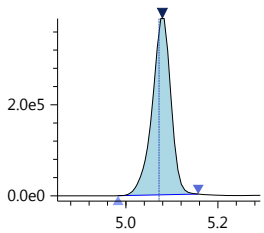
RT 5.079 Area 1103285
ISTD 588.80>419.00 (-) 3.89e5



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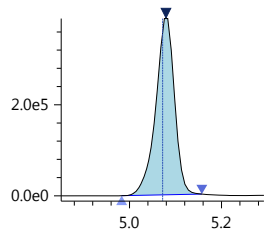
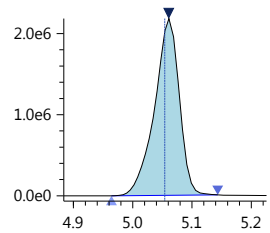
Q 588.80>419.00 (-) 3.89e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.061 Area 6302301
ISTD 570.00>525.00 (-) 2.19e6



Insight Report

Printed at 1/14/2019 11:23:27 AM

122018_050

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Date acquired: 12/21/2018 3:40:12 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_050.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 2

PFBA-13C_IS
Conc 5.0000
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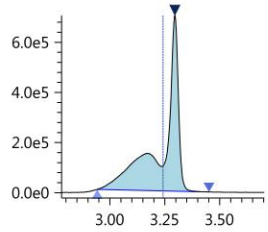
ISTD 216.90>172.15 (-) 7.07e5



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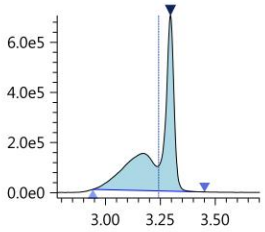
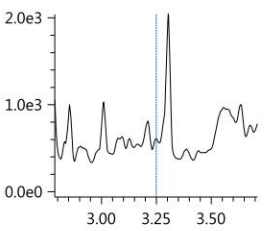


PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 2.04e3



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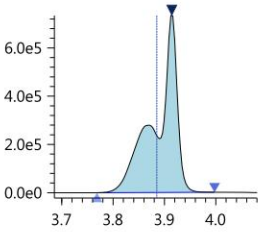
RT 3.914 Area 2106952
ISTD 267.90>223.00 (-) 7.34e5



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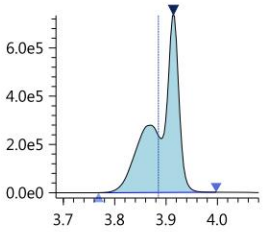
Conc 5.3613
RT 3.914 Area 2106952
Q 267.90>223.00 (-) 7.34e5



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Conc -0.0064
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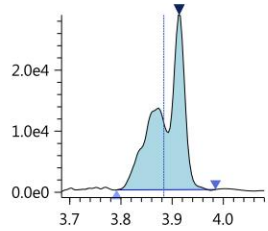
Q 263.05>219.10 (-) 2.90e4



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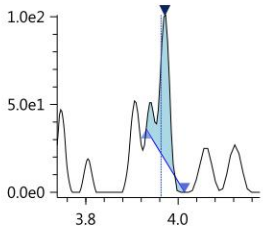
RT 3.971 Area 121
Q 299.00>80.00 (-) 1.01e2



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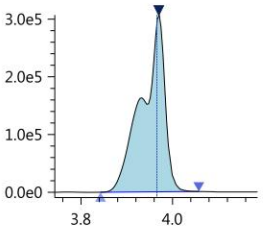
Q 301.80>80.00 (-) 3.07e5



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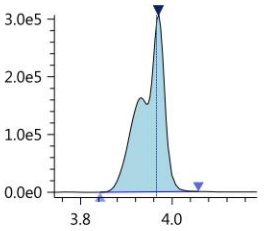

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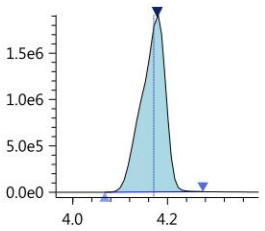

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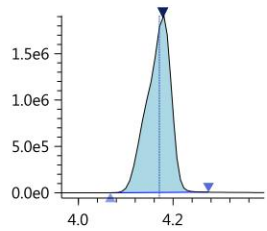

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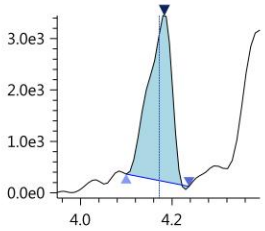
Q 313.00>269.00 (-) 3.45e3



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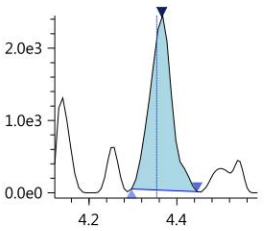
RT 4.366 Area 8504
Q 362.90>319.00 (-) 2.45e3



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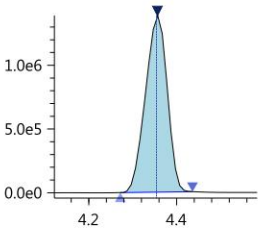
ISTD 366.90>322.10 (-) 1.39e6



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Conc 4.7538
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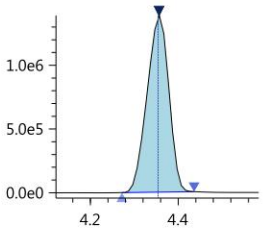
Q 366.90>322.10 (-) 1.39e6



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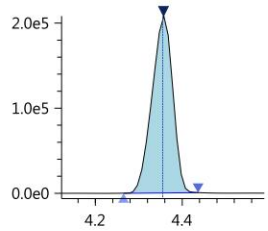
ISTD 402.70>84.05 (-) 2.08e5



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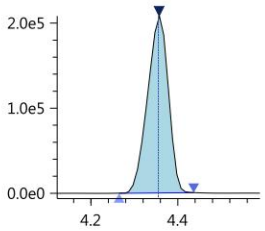

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Conc 0.0143
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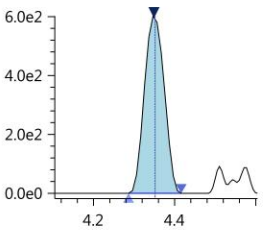
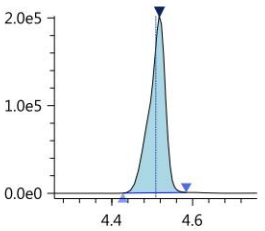
Q 399.00>80.00 (-) 6.02e2



6_2-FTS-13C
Conc 2.6930
RT 4.518 Area 547452
Q 428.90>409.00 (-) 2.02e5



6_2-FTS-13C_IS
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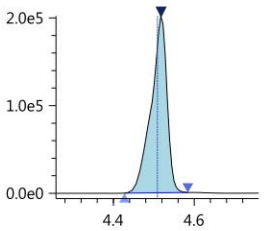

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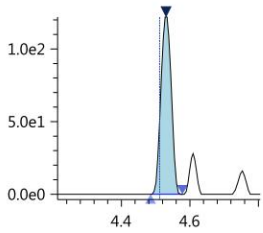
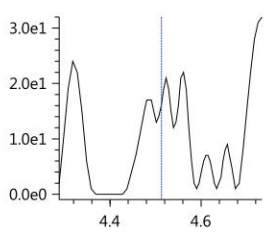
RT 4.531 Area 259
Q 427.00>407.00 (-) 1.22e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.20e1



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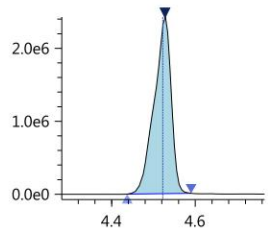

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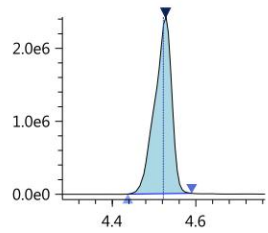
Q 416.80>372.05 (-) 2.43e6



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Conc 0.0140
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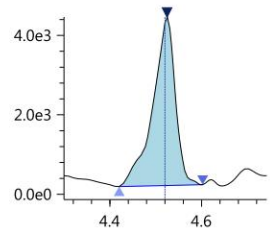

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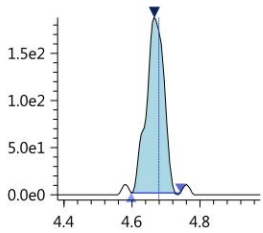
RT 4.666 Area 680
Q 499.00>80.00 (-) 1.88e2



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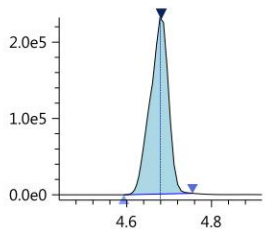
RT 4.681 Area 702501
ISTD 502.80>80.05 (-) 2.32e5



PFOS-13C
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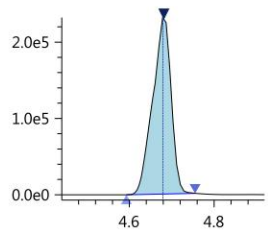

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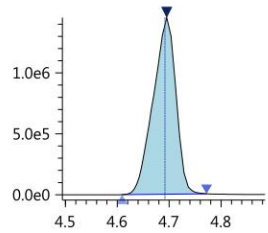

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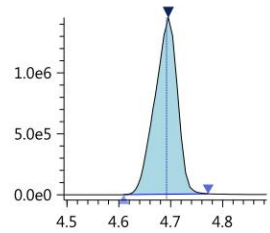

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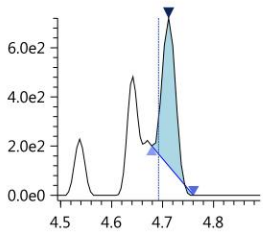

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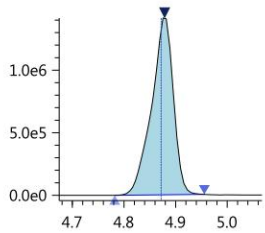

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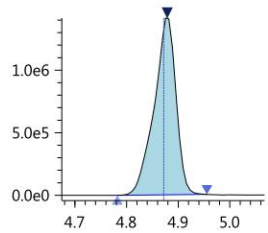
Q 514.80>469.95 (-) 1.42e6



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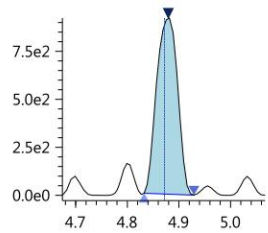
Q 513.00>468.80 (-) 9.23e2



8_2-FTS-13C_IS
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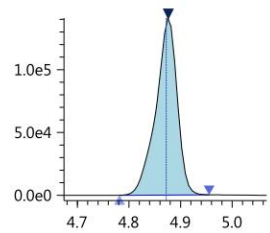
ISTD 528.80>509.00 (-) 1.41e5



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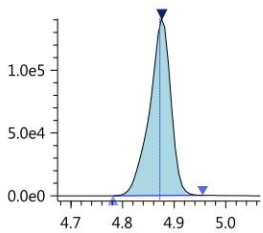
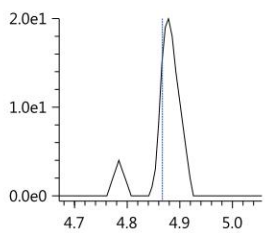


8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.00e1



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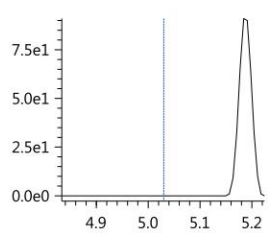
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 9.10e1



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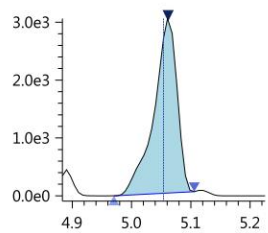
RT 5.062 Area 8174
Q 563.00>518.90 (-) 3.06e3



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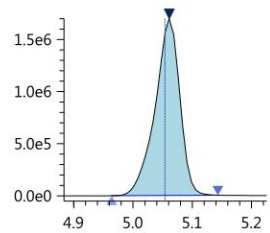

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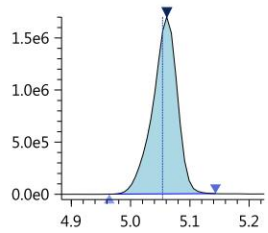

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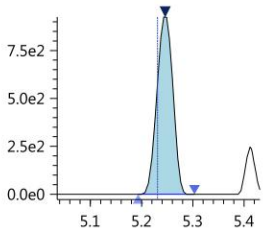
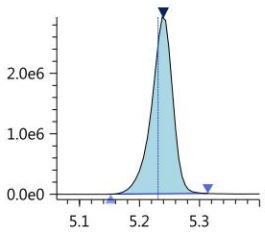
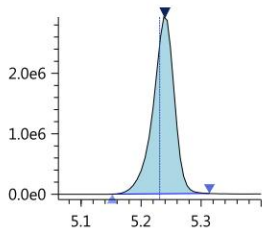
RT 5.246 Area 2029
Q 613.05>569.00 (-) 9.25e2



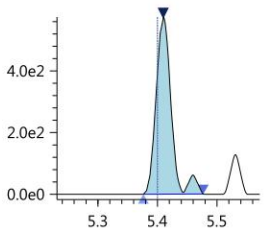
PFDoA-13C
Conc 4.5725
RT 5.240 Area 7212257
Q 614.80>569.95 (-) 2.93e6



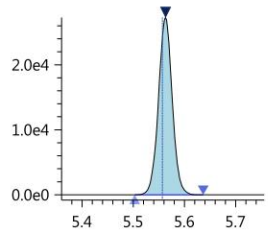
PFDoA-13C_IS
Conc 5.0000
RT 5.240 Area 7212257
ISTD 614.80>569.95 (-) 2.93e6



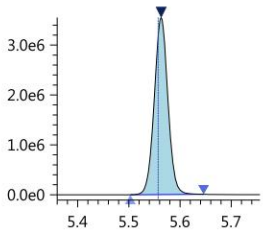
PFTrDA
Conc 0.0006
RT 5.410 Area 1023
Q 663.00>618.90 (-) 5.75e2



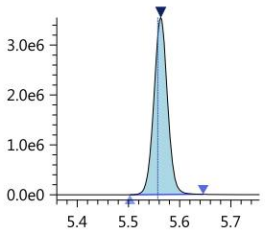
PFTeDA
Conc 0.0174
RT 5.563 Area 51054
Q 713.40>669.00 (-) 2.73e4



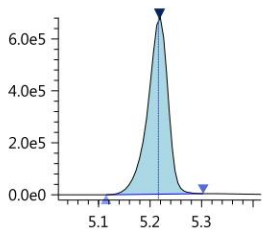
PFTeDA-13C
Conc 5.6754
RT 5.563 Area 6598727
Q 714.70>669.90 (-) 3.55e6



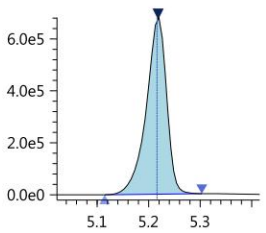
PFTeDA-13C_IS
Conc 5.0000
RT 5.563 Area 6598727
ISTD 714.70>669.90 (-) 3.55e6



FOSA-13C_IS
Conc 5.0000
RT 5.218 Area 1864357
ISTD 506.00>78.05 (-) 6.82e5



FOSA-13C
Conc 4.8804
RT 5.218 Area 1864357
Q 506.00>78.05 (-) 6.82e5



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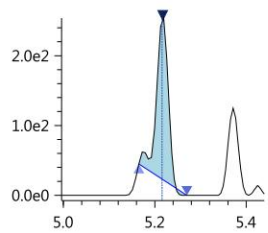
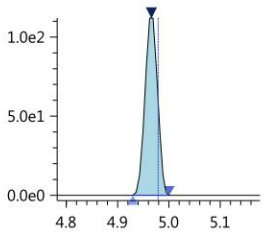
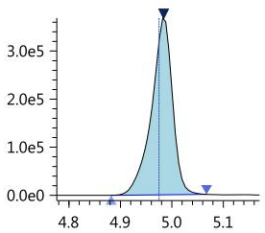
Conc 0.0007
RT 5.217 Area 411
Q 498.20>78.00 (-) 2.54e2



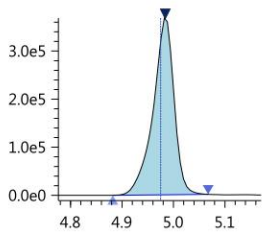
N-MeFOSAA
Conc 0.0018
RT 4.966 Area 194
Q 570.20>419.00 (-) 1.12e2



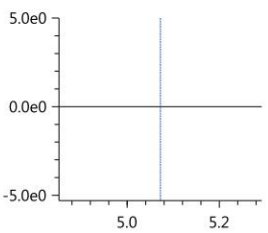
N-MeFOSAA-d3
Conc 7.9476
RT 4.984 Area 1040128
Q 572.80>419.05 (-) 3.69e5



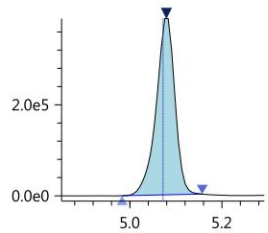
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.984 Area 1040128
ISTD 572.80>419.05 (-) 3.69e5



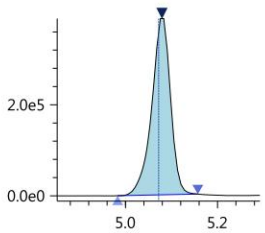
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



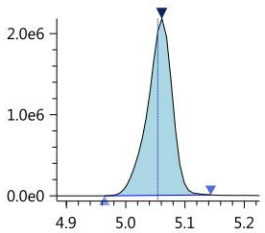
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.079 Area 1103285
ISTD 588.80>419.00 (-) 3.89e5



N-EtFOSAA-d5
Conc 8.1170
RT 5.079 Area 1103285
Q 588.80>419.00 (-) 3.89e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.061 Area 6302301
ISTD 570.00>525.00 (-) 2.19e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_051
Lab ID: K1812302-002
RunType: N/A
Matrix: Soil

Date Acquired: 12/21/18 03:50
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D5-EtFOSAA	184	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D3-MeFOSAA	174	70	130	Native ok
	13C2-6:2 FTS	58	70	130	Native ok
Lab Control Sample Recovery	D3-MeFOSAA	158	20	154	Native ok
	D5-EtFOSAA	161	29	153	Native ok
Method Blank Surrogates	D5-EtFOSAA	156	29	153	High Bias ND
Surrogates	D5-EtFOSAA	159	29	153	High Bias ND

Primary Review: _____

Printed: 1/14/19 12:50
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Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_051	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:50	**Vial:**	6
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-002	**Raw Units:**	ng/mL

Bottle ID:	K1812302-002.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**	328407	**Report Group:**	K1812302
Analysis	PFC/537M	**Prep Method:**	EPA 3550B		
		Prep Date:	12/17/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.059	0.00	6429567	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.967	0.00	1070666	3.9481	79		33 - 109	Y
18O2-PFHxS	4.357	0.00	720481	4.4367	89		36 - 120	Y
13C4-PFOS	4.681	0.00	720282	4.3576	87		32 - 130	Y
13C4-PFBA	3.295	-0.02	3606361	4.5072	90		34 - 116	Y
13C5-PFPeA	3.912	0.00	2091789	5.2173	104		39 - 133	Y
13C2-PFHxA	4.177	0.00	6604729	4.6866	94		32 - 136	Y
13C4-PFHpA	4.357	0.00	4953615	4.8211	96		36 - 133	Y
13C4-PFOA	4.527		6856537	4.1971	84		31 - 134	Y
13C5-PFNA	4.694	0.00	4429298	4.1575	83		27 - 133	Y
13C2-PFDA	4.877	0.00	4364447	4.4629	89		30 - 137	Y
13C2-PFUnDA	5.059	0.00	4894675	4.3770	88		32 - 146	Y
13C2-PFDoDA	5.239		7278547	4.5232	90		36 - 136	Y
13C2-PFTeDA	5.563		6581568	5.5486	111		39 - 138	Y
13C8-FOSA	5.217	+0.00	1922905	4.9340	99		40 - 132	Y
D3-MeFOSAA	4.982	0.00	1017868	7.6236	152		20 - 154	Y
D5-EtFOSAA	5.079		1104758	7.9669	159	*	29 - 153	Y
13C2-6:2 FTS	4.517	0.00	533213	2.5710	51		30 - 140	Y
13C2-8:2 FTS	4.875	0.00	380493	2.7204	54		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.944	-0.02	354	0.0019	0.014	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.350	-0.01	2530	0.0169	0.12	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

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1st CM 01/14/19

2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_051	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:50	**Vial:**	6
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-002	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

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)	4.673	-0.01	815	0.0080	0.058	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.912	0.00	96981	0.0010	0.0073	U	Y
Perfluorohexanoic acid (PFHxA)	4.169	-0.01	11876	0.0092	0.067	U	Y
Perfluoroheptanoic acid (PFHpA)	4.355	0.00	5437	0.0057	0.041	U	Y
Perfluorooctanoic acid (PFOA)	4.525	0.00	15463	0.0149	0.11	U	Y
Perfluorononanoic acid (PFNA)	4.693	0.00	1833	-0.0021	0	U	Y
Perfluorodecanoic acid (PFDA)	4.881	+0.00	2691	0.0037	0.027	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.064	+0.00	6614	0.0055	0.040	U	Y
Perfluorododecanoic acid (PFDoDA)	5.250	+0.01	1197	0.0083	0.060	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.421	+0.01	865	0.0005	0.0036	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.563		43148	-0.0005	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.222	+0.01	1858	0.0031	0.023	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0		0	0	0	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.873	0.00	138	0.0020	0.015	U	Y

Prep Amount:	1.156 g	**Dilution:**	1
Prep Final Amount:	8.00 mL	**Basis Factor:**	95.20

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

Insight Report

Printed at 1/14/2019 12:39:49 PM

122018_051

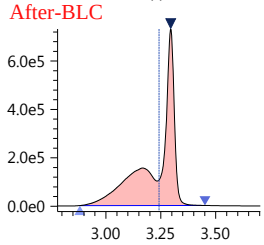
Sample ID: K1812302-002
Date acquired: 12/21/2018 3:50:40 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_051.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.295	3574615	3574615	2	5.0000	ng/mL	----
PFBA-13C	M	3.295	3606361	6429567	26	4.5072	ng/mL	----
PFBA	ND(W/B)	----	----	3574615	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.912	2091789	2091789	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.912	2091789	6429567	26	5.2173	ng/mL	----
PFPeA	Auto	3.912	96981	2091789	4	0.0010	ng/mL	----
PFBS_1	Auto	3.944	354	1070666	16	0.0019	ng/mL	----
PFBS-13C	Auto	3.967	1070666	6429567	26	3.9481	ng/mL	----
PFBS-13C_IS	Auto	3.967	1070666	1070666	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.177	6604729	6604729	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.177	6604729	6429567	26	4.6866	ng/mL	----
PFHxA	M	4.169	11876	6604729	6	0.0092	ng/mL	----
PFHpA	M	4.355	5437	4953615	8	0.0057	ng/mL	----
PFHpA-13C_IS	Auto	4.357	4953615	4953615	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.357	4953615	6429567	26	4.8211	ng/mL	----
PFHxS-18O_IS	Auto	4.357	720481	720481	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.357	720481	6429567	26	4.4367	ng/mL	----
PFHxS_1	Auto	4.350	2530	720481	7	0.0169	ng/mL	----
6_2-FTS-13C	Auto	4.517	533213	6429567	26	2.5710	ng/mL	----
6_2-FTS-13C_IS	Auto	4.517	533213	533213	10	5.0000	ng/mL	----
6_2-FTS_1	ND(W/B)	----	----	533213	10	----	ng/mL	----
PFHpS_1	ND(W/B)	----	----	720481	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.527	6856537	6856537	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.527	6856537	6429567	26	4.1971	ng/mL	----
PFOA	M	4.525	15463	6856537	9	0.0149	ng/mL	----
PFOS_1	M	4.673	815	720282	13	0.0080	ng/mL	----
PFOS-13C_IS	Auto	4.681	720282	720282	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.681	720282	6429567	26	4.3576	ng/mL	----
PFNA-13C_IS	Auto	4.694	4429298	4429298	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.694	4429298	6429567	26	4.1575	ng/mL	----
PFNA	M	4.693	1833	4429298	11	-0.0021	ng/mL	----
PFDA-13C_IS	Auto	4.877	4364447	4364447	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.877	4364447	6429567	26	4.4629	ng/mL	----
PFDA	M	4.881	2691	4364447	12	0.0037	ng/mL	----
8_2-FTS-13C_IS	Auto	4.875	380493	380493	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.875	380493	6429567	26	2.7204	ng/mL	----
8_2-FTS_1	M	4.873	138	380493	15	0.0020	ng/mL	----
PFDS_1	ND(W/B)	----	----	720282	13	----	ng/mL	----
PFUnA	Auto	5.064	6614	4894675	14	0.0055	ng/mL	----
PFUnA-13C_IS	Auto	5.059	4894675	4894675	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.059	4894675	6429567	26	4.3770	ng/mL	----
PFDoA	Auto	5.250	1197	7278547	17	0.0083	ng/mL	----
PFDoA-13C	Auto	5.239	7278547	6429567	26	4.5232	ng/mL	----
PFDoA-13C_IS	Auto	5.239	7278547	7278547	17	5.0000	ng/mL	----
PFTrDA	Auto	5.421	865	6581568	22	0.0005	ng/mL	----
PFTeDA	Auto	5.563	43148	6581568	22	-0.0005	ng/mL	----
PFTeDA-13C	Auto	5.563	6581568	6429567	26	5.5486	ng/mL	----
PFTeDA-13C_IS	Auto	5.563	6581568	6581568	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.217	1922905	1922905	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.217	1922905	6429567	26	4.9340	ng/mL	----
FOSA	Auto	5.222	1858	1922905	18	0.0031	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	1017868	19	----	ng/mL	----
N-MeFOSAA-d3	Auto	4.982	1017868	6429567	26	7.6236	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.982	1017868	1017868	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	1104758	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.079	1104758	1104758	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.079	1104758	6429567	26	7.9669	ng/mL	----
13C7-PFUnDA_IS	Auto	5.059	6429567	6429567	26	5.0000	ng/mL	----

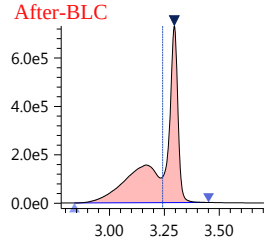
Insight Report

Printed at 1/14/2019 12:39:49 PM

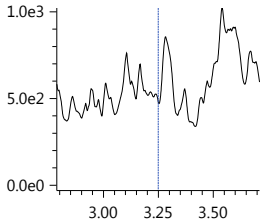
PFBA-13C_IS
Conc 5.0000
RT 3.295 Area 3574615
ISTD 216.90>172.15 (-) 7.32e5
After-BLC



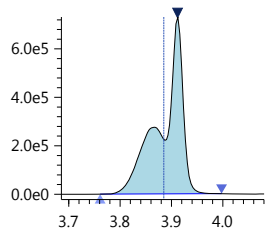
PFBA-13C
Conc 4.5072
RT 3.295 Area 3606361
Q 216.90>172.15 (-) 7.32e5
After-BLC



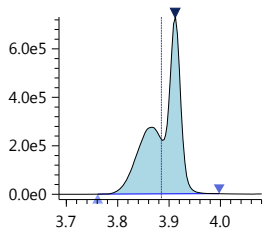
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.02e3



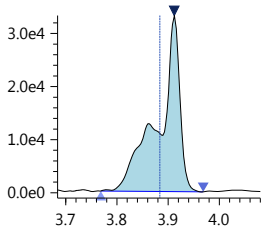
PFPeA-13C_IS
Conc 5.0000
RT 3.912 Area 2091789
ISTD 267.90>223.00 (-) 7.32e5



PFPeA-13C
Conc 5.2173
RT 3.912 Area 2091789
Q 267.90>223.00 (-) 7.32e5



PFPeA
Conc 0.0010
RT 3.912 Area 96981
Q 263.05>219.10 (-) 3.34e4



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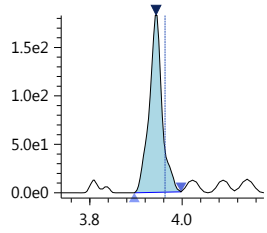
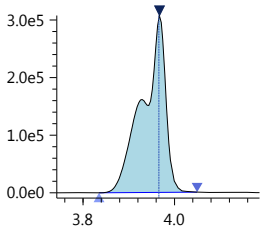
Conc 0.0019
RT 3.944 Area 354
Q 299.00>80.00 (-) 1.83e2



PFBS-13C
Conc 3.9481
RT 3.967 Area 1070666
Q 301.80>80.00 (-) 3.08e5



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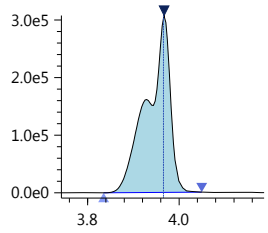
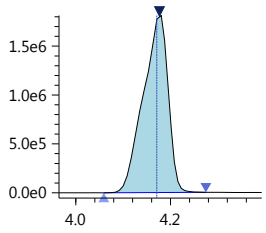
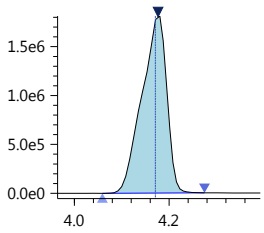
ISTD 301.80>80.00 (-) 3.08e5



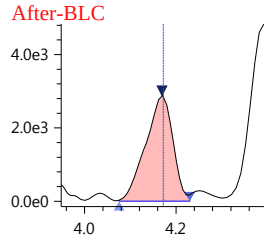
PFHxA-13C_IS
Conc 5.0000
RT 4.177 Area 6604729
ISTD 314.90>270.10 (-) 1.81e6



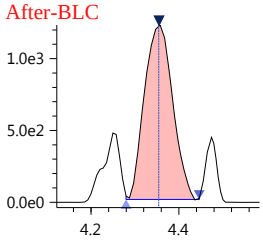
PFHxA-13C
Conc 4.6866
RT 4.177 Area 6604729
Q 314.90>270.10 (-) 1.81e6



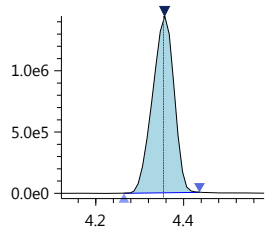
PFHxA
Conc 0.0092
RT 4.169 Area 11876
Q 313.00>269.00 (-) 4.83e3
After-BLC



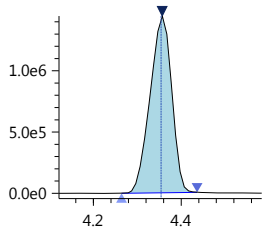
PFHpA
Conc 0.0057
RT 4.355 Area 5437
Q 362.90>319.00 (-) 1.23e3
After-BLC



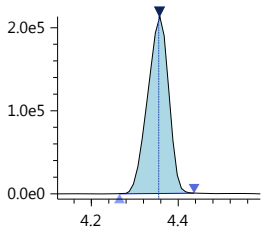
PFHpA-13C_IS
Conc 5.0000
RT 4.357 Area 4953615
ISTD 366.90>322.10 (-) 1.45e6



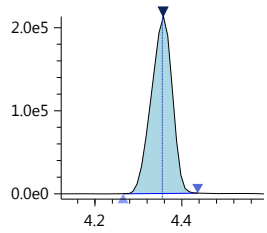
PFHpA-13C
Conc 4.8211
RT 4.357 Area 4953615
Q 366.90>322.10 (-) 1.45e6



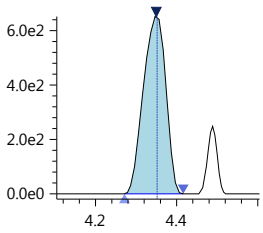
PFHxS-18O_IS
Conc 5.0000
RT 4.357 Area 720481
ISTD 402.70>84.05 (-) 2.13e5



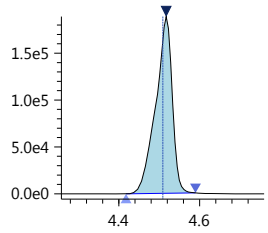
PFHxS-18O
Conc 4.4367
RT 4.357 Area 720481
Q 402.70>84.05 (-) 2.13e5



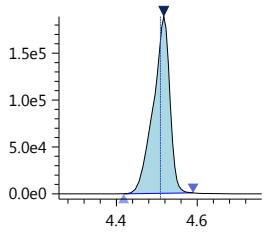
PFHxS_1
Conc 0.0169
RT 4.350 Area 2530
Q 399.00>80.00 (-) 6.52e2



6_2-FTS-13C
Conc 2.5710
RT 4.517 Area 533213
Q 428.90>409.00 (-) 1.89e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.517 Area 533213
ISTD 428.90>409.00 (-) 1.89e5



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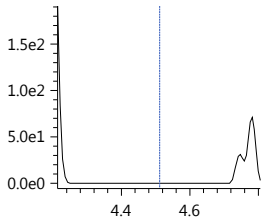
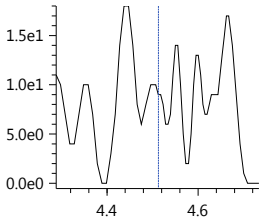
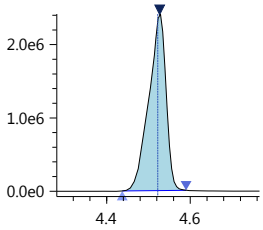
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 1.91e2



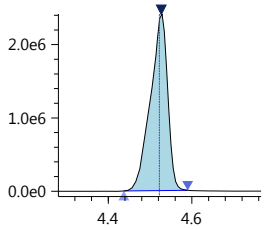
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 1.80e1



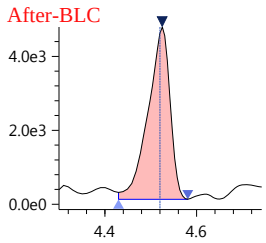
PFOA-13C_IS
Conc 5.0000
RT 4.527 Area 6856537
ISTD 416.80>372.05 (-) 2.42e6



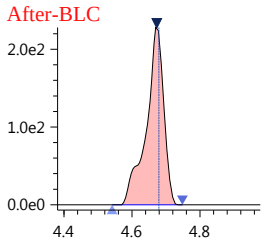
PFOA-13C
Conc 4.1971
RT 4.527 Area 6856537
Q 416.80>372.05 (-) 2.42e6



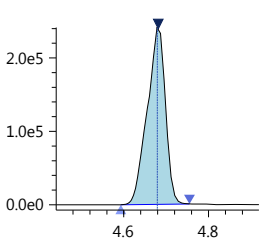
PFOA
Conc 0.0149
RT 4.525 Area 15463
Q 413.00>369.00 (-) 4.80e3



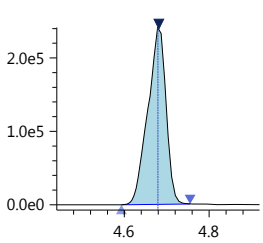
PFOS_1
Conc 0.0080
RT 4.673 Area 815
Q 499.00>80.00 (-) 2.28e2



PFOS-13C_IS
Conc 5.0000
RT 4.681 Area 720282
ISTD 502.80>80.05 (-) 2.41e5



PFOS-13C
Conc 4.3576
RT 4.681 Area 720282
Q 502.80>80.05 (-) 2.41e5



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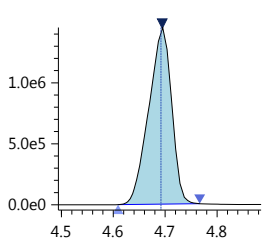
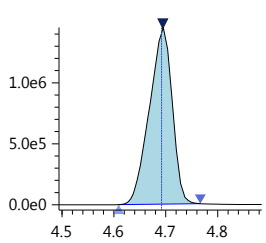
Conc 5.0000
RT 4.694 Area 4429298
ISTD 467.80>423.00 (-) 1.45e6



PFNA-13C
Conc 4.1575
RT 4.694 Area 4429298
Q 467.80>423.00 (-) 1.45e6



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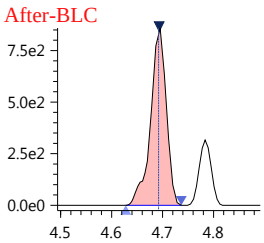
Conc -0.0021
RT 4.693 Area 1833
Q 463.00>418.90 (-) 8.59e2



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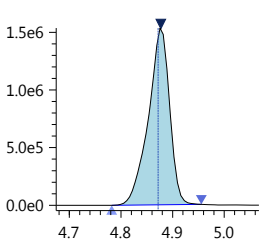
ISTD 514.80>469.95 (-) 1.54e6



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Conc 4.4629
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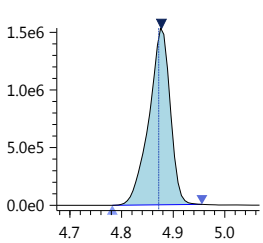
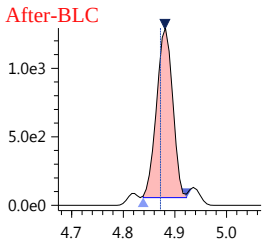
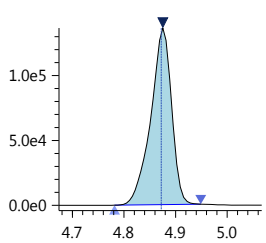
Q 514.80>469.95 (-) 1.54e6



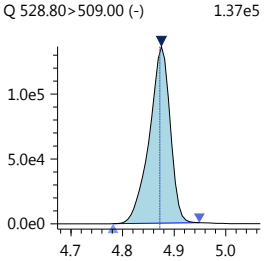
PFDA
Conc 0.0037
RT 4.881 Area 2691
Q 513.00>468.80 (-) 1.29e3



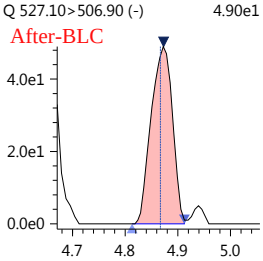
8_2-FTS-13C_IS
Conc 5.0000
RT 4.875 Area 380493
ISTD 528.80>509.00 (-) 1.37e5



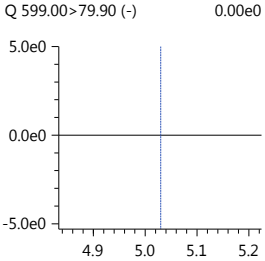
8_2-FTS-13C
Conc 2.7204
RT 4.875 Area 380493
Q 528.80>509.00 (-) 1.37e5



8_2-FTS_1
Conc 0.0020
RT 4.873 Area 138
Q 527.10>506.90 (-) 4.90e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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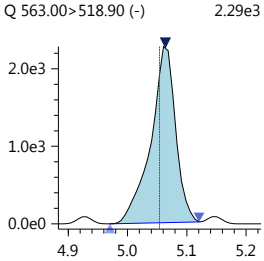
Conc 0.0055
RT 5.064 Area 6614
Q 563.00>518.90 (-) 2.29e3



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Conc 5.0000
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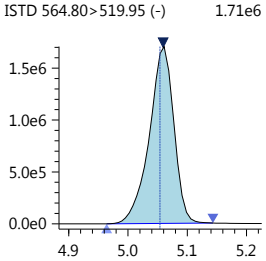
ISTD 564.80>519.95 (-) 1.71e6



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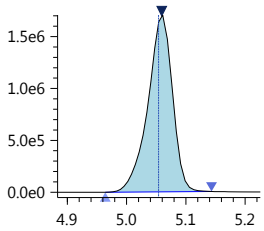
PFUnA-13C
Conc 4.3770
RT 5.059 Area 4894675
Q 564.80>519.95 (-) 1.71e6



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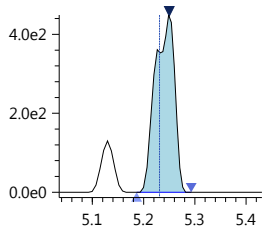
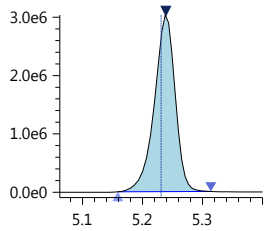
Conc 0.0083
RT 5.250 Area 1197
Q 613.05>569.00 (-) 4.49e2



PFDoA-13C
Conc 4.5232
RT 5.239 Area 7278547
Q 614.80>569.95 (-) 3.04e6



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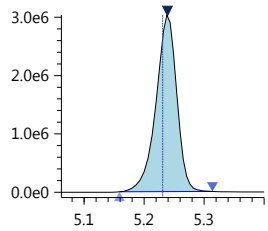
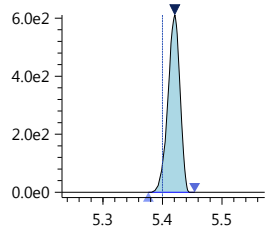
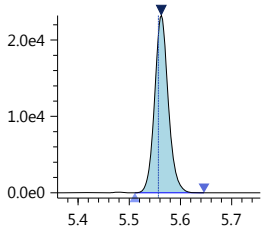
ISTD 614.80>569.95 (-) 3.04e6



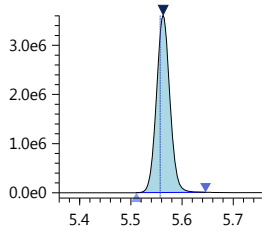
PFTrDA
Conc 0.0005
RT 5.421 Area 865
Q 663.00>618.90 (-) 6.11e2



PFTeDA
Conc -0.0005
RT 5.563 Area 43148
Q 713.40>669.00 (-) 2.32e4



PFTeDA-13C
Conc 5.5486
RT 5.563 Area 6581568
Q 714.70>669.90 (-) 3.61e6



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Conc 5.0000
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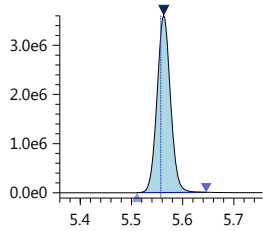
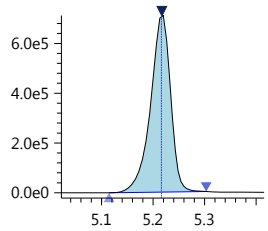


FOSA-13C_IS
Conc 5.0000
RT 5.217 Area 1922905
ISTD 506.00>78.05 (-) 7.12e5



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RT 5.217 Area 1922905
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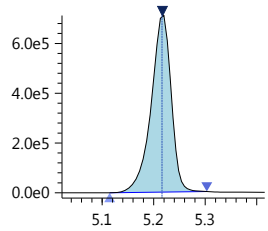

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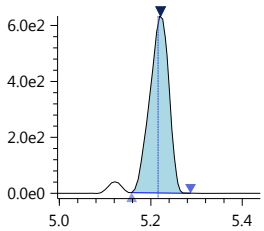

N-MeFOSAA
Conc ----
RT ---- Area ----
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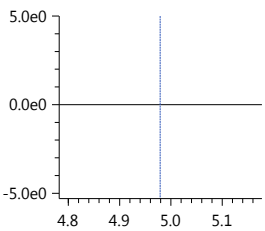

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Conc 7.6236
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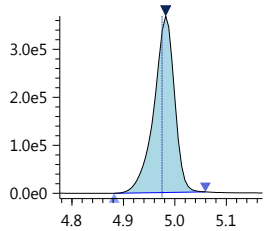
Q 572.80>419.05 (-) 3.69e5



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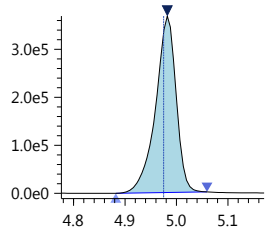
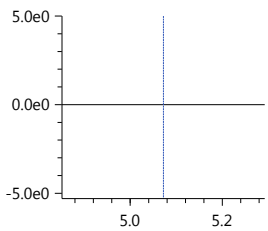
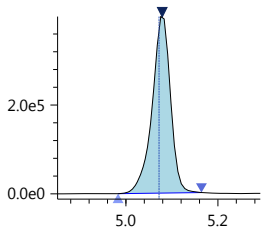


N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.079 Area 1104758
ISTD 588.80>419.00 (-) 3.99e5



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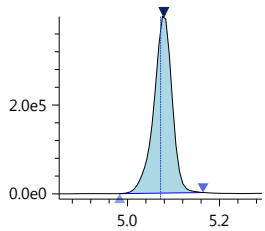

13C7-PFUnDA_IS
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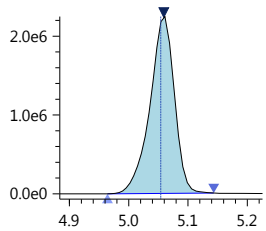

Insight Report

Printed at 1/14/2019 11:23:27 AM

122018_051

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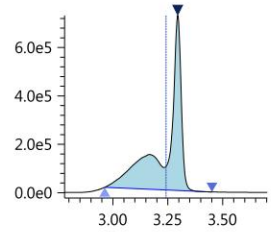
Date acquired: 12/21/2018 3:50:40 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_051.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 2

PFBA-13C_IS
Conc 5.0000
RT 3.295 Area 3249898
ISTD 216.90>172.15 (-) 7.32e5



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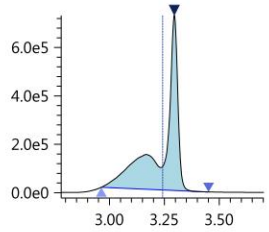
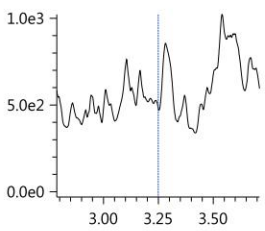


PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.02e3



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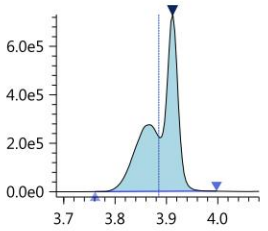
Conc 5.0000
RT 3.912 Area 2091789
ISTD 267.90>223.00 (-) 7.32e5



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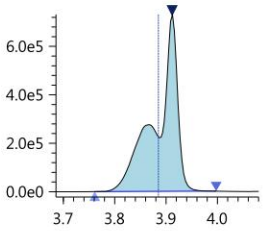
RT 3.912 Area 2091789
Q 267.90>223.00 (-) 7.32e5



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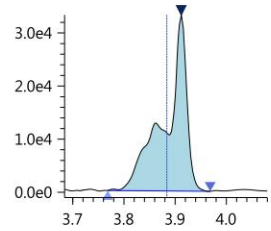
Q 263.05>219.10 (-) 3.34e4



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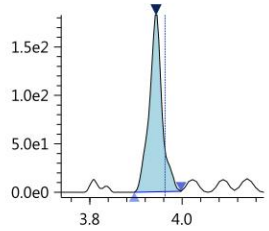
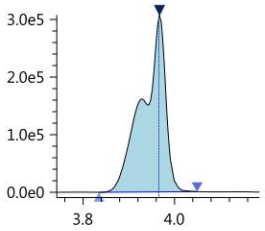
Conc 0.0019
RT 3.944 Area 354
Q 299.00>80.00 (-) 1.83e2



PFBS-13C
Conc 3.9481
RT 3.967 Area 1070666
Q 301.80>80.00 (-) 3.08e5



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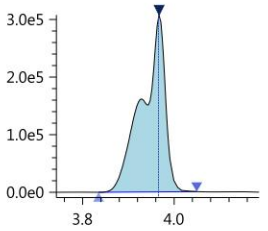

PFHxA-13C_IS
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RT 4.177 Area 6604729
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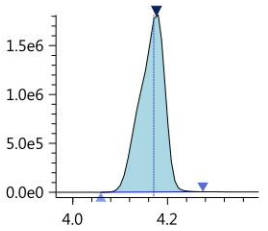

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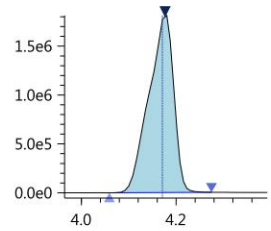

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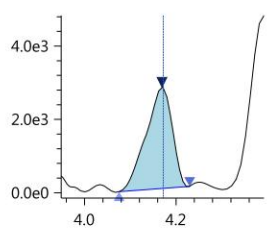

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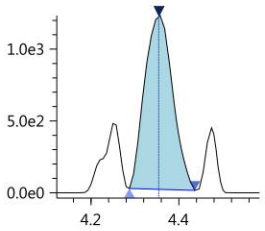
Conc 0.0057
RT 4.355 Area 5397
Q 362.90>319.00 (-) 1.23e3



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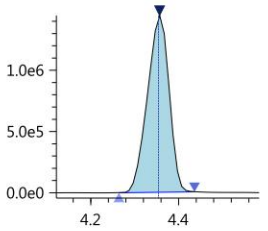
ISTD 366.90>322.10 (-) 1.45e6



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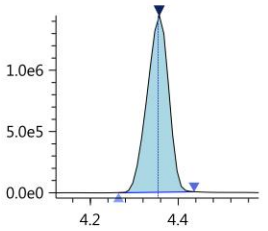

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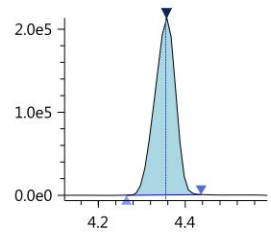
Conc 5.0000
RT 4.357 Area 720481
ISTD 402.70>84.05 (-) 2.13e5



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Conc 4.4367
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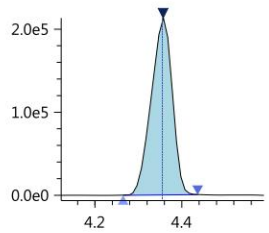
Q 402.70>84.05 (-) 2.13e5



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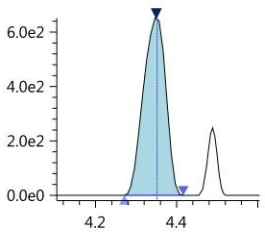
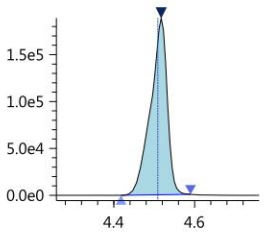
Conc 0.0169
RT 4.350 Area 2530
Q 399.00>80.00 (-) 6.52e2



6_2-FTS-13C
Conc 2.5710
RT 4.517 Area 533213
Q 428.90>409.00 (-) 1.89e5



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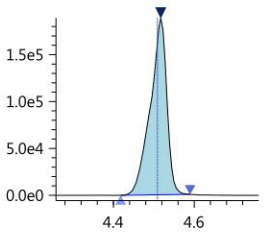

Insight Report

Printed at 1/14/2019 11:23:27 AM

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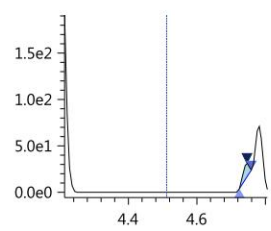
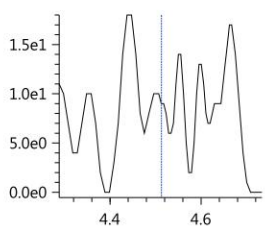


PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 1.80e1



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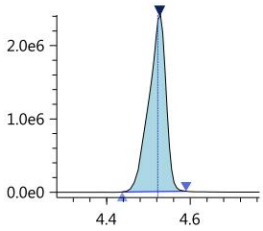
ISTD 416.80>372.05 (-) 2.42e6



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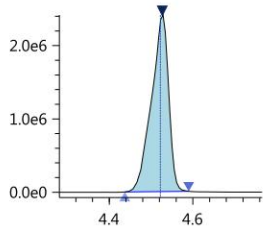
Conc 4.1971
RT 4.527 Area 6856537
Q 416.80>372.05 (-) 2.42e6



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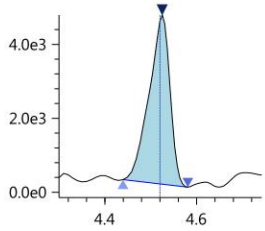
Q 413.00>369.00 (-) 4.80e3



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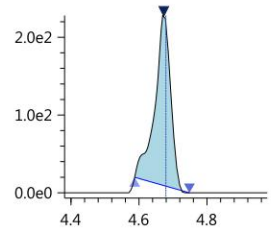
RT 4.673 Area 710
Q 499.00>80.00 (-) 2.28e2



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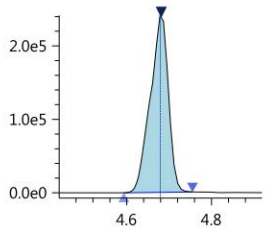
ISTD 502.80>80.05 (-) 2.41e5



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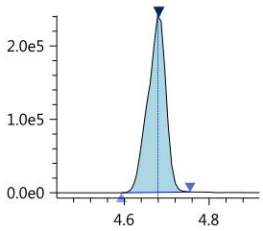
Q 502.80>80.05 (-) 2.41e5



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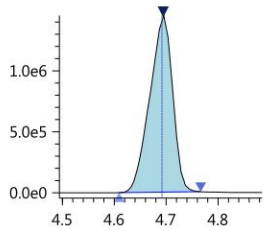
ISTD 467.80>423.00 (-) 1.45e6



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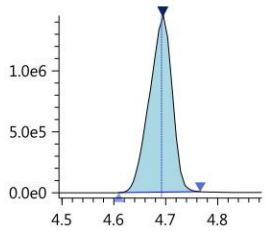

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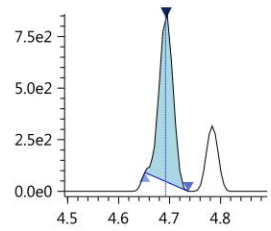
RT 4.693 Area 1557
Q 463.00>418.90 (-) 8.59e2



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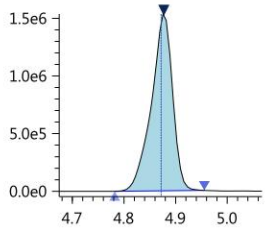

PFDA-13C
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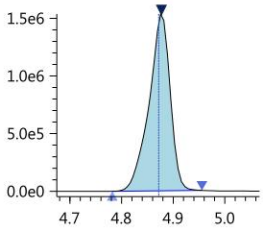
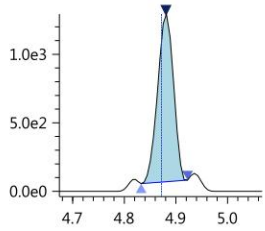
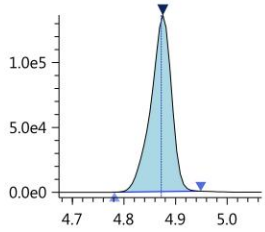
RT 4.877 Area 4364447
Q 514.80>469.95 (-) 1.54e6



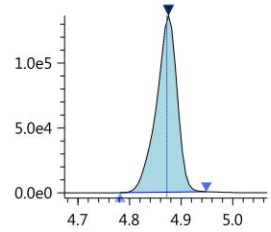
PFDA
Conc 0.0036
RT 4.881 Area 2623
Q 513.00>468.80 (-) 1.29e3



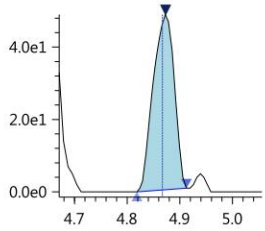
8_2-FTS-13C_IS
Conc 5.0000
RT 4.875 Area 380493
ISTD 528.80>509.00 (-) 1.37e5



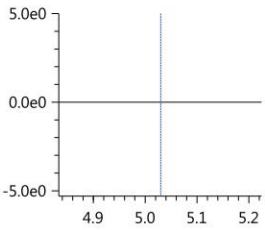
8_2-FTS-13C
Conc 2.7204
RT 4.875 Area 380493
Q 528.80>509.00 (-) 1.37e5



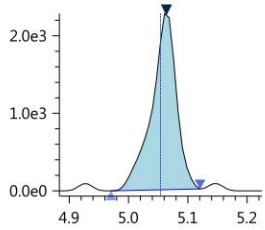
8_2-FTS_1
Conc 0.0020
RT 4.873 Area 135
Q 527.10>506.90 (-) 4.90e1



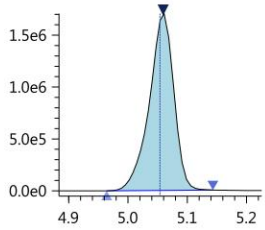
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0055
RT 5.064 Area 6614
Q 563.00>518.90 (-) 2.29e3



PFUnA-13C_IS
Conc 5.0000
RT 5.059 Area 4894675
ISTD 564.80>519.95 (-) 1.71e6



Insight Report

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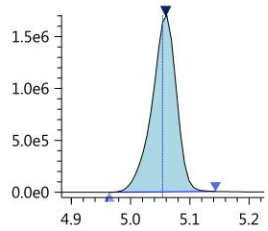
PFUnA-13C
Conc 4.3770
RT 5.059 Area 4894675
Q 564.80>519.95 (-) 1.71e6



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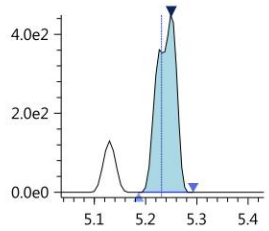
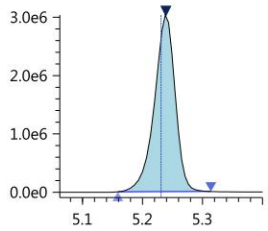
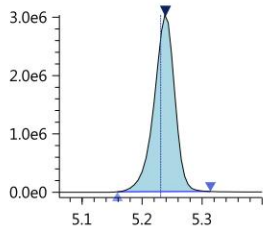
Conc 0.0083
RT 5.250 Area 1197
Q 613.05>569.00 (-) 4.49e2



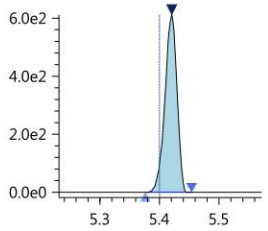
PFDoA-13C
Conc 4.5232
RT 5.239 Area 7278547
Q 614.80>569.95 (-) 3.04e6



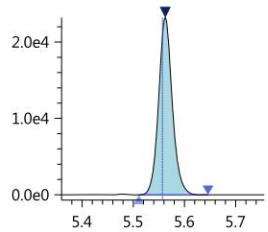
PFDoA-13C_IS
Conc 5.0000
RT 5.239 Area 7278547
ISTD 614.80>569.95 (-) 3.04e6



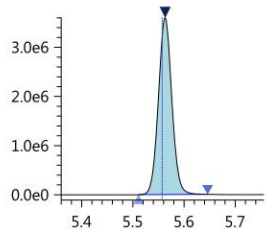
PFTrDA
Conc 0.0005
RT 5.421 Area 865
Q 663.00>618.90 (-) 6.11e2



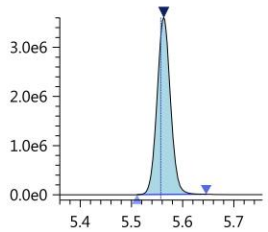
PFTeDA
Conc -0.0005
RT 5.563 Area 43148
Q 713.40>669.00 (-) 2.32e4



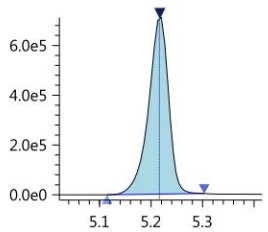
PFTeDA-13C
Conc 5.5486
RT 5.563 Area 6581568
Q 714.70>669.90 (-) 3.61e6



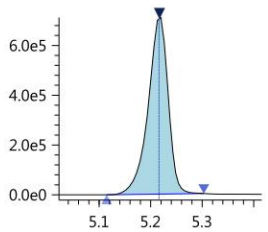
PFTeDA-13C_IS
Conc 5.0000
RT 5.563 Area 6581568
ISTD 714.70>669.90 (-) 3.61e6



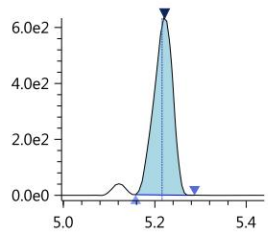
FOSA-13C_IS
Conc 5.0000
RT 5.217 Area 1922905
ISTD 506.00>78.05 (-) 7.12e5



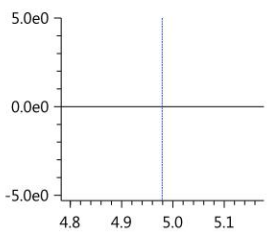
FOSA-13C
Conc 4.9340
RT 5.217 Area 1922905
Q 506.00>78.05 (-) 7.12e5



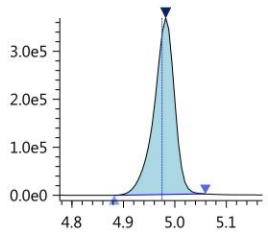
FOSA
Conc 0.0031
RT 5.222 Area 1858
Q 498.20>78.00 (-) 6.34e2



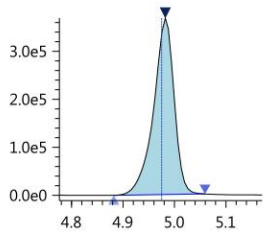
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



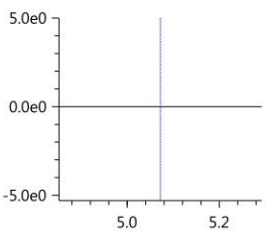
N-MeFOSAA-d3
Conc 7.6236
RT 4.982 Area 1017868
Q 572.80>419.05 (-) 3.69e5



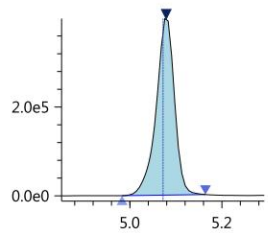
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.982 Area 1017868
ISTD 572.80>419.05 (-) 3.69e5



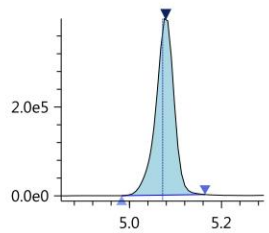
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



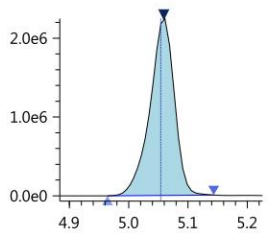
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.079 Area 1104758
ISTD 588.80>419.00 (-) 3.99e5



N-EtFOSAA-d5
Conc 7.9669
RT 5.079 Area 1104758
Q 588.80>419.00 (-) 3.99e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.059 Area 6429567
ISTD 570.00>525.00 (-) 2.25e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_133
Lab ID: K1812302-003
RunType: N/A
Matrix: Water

Date Acquired: 1/5/19 13:29
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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	
Duplicate 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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Perfluorohexane sulfonic acid (PFHxS)	2138701		1503978	See Dilution
	Perfluoropentanoic acid (PFPeA)	12446171		11513018	See Dilution
	Perfluorohexanoic acid (PFHxA)	14444678		13130962	See Dilution

Primary Review: _____

Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_133	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 13:29	**Vial:**	15
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-003	**Raw Units:**	ng/mL

Bottle ID:	K1812302-003.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	K1812302
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.079	+0.01	3962089	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.979	+0.00	620055	3.9106	78	20 - 109	Y
18O2-PFHxS	4.372	+0.00	515886	4.7160	94	26 - 122	Y
13C4-PFOS	4.696	+0.00	449457	3.9367	79	25 - 121	Y
13C4-PFBA	3.316	-0.01	2251423	4.4284	89	27 - 124	Y
13C5-PFPeA	3.923	+0.00	1288847	4.5492	91	27 - 138	Y
13C2-PFHxA	4.189	+0.00	4458345	4.7125	94	28 - 132	Y
13C4-PFHpA	4.373	+0.00	2661814	3.7507	75	19 - 139	Y
13C4-PFOA	4.541	+0.00	3925929	4.1501	83	22 - 130	Y
13C5-PFNA	4.711	+0.01	3460879	4.3969	88	20 - 127	Y
13C2-PFDA	4.896	+0.00	2816170	4.0984	82	24 - 125	Y
13C2-PFUnDA	5.079	+0.01	2425747	3.7729	75	22 - 125	Y
13C2-PFDoDA	5.259	+0.01	3618061	3.8784	78	19 - 122	Y
13C2-PFTeDA	5.581	+0.01	2689958	4.0298	81	13 - 124	Y
13C8-FOSA	5.236	+0.01	1044108	3.4371	69	18 - 109	Y
D3-MeFOSAA	5.002	+0.01	382090	3.1781	64	9 - 123	Y
D5-EtFOSAA	5.099	+0.01	375933	3.2570	65	12 - 126	Y
13C2-6:2 FTS	4.530	+0.00	475056	4.8270	97	10 - 226	Y
13C2-8:2 FTS	4.893	+0.00	318126	4.1564	83	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)	3.978	+0.00	954201	7.5545	200		Y
Perfluorohexane sulfonic acid (PFHxS)	4.369	+0.00	2138701	21.5161	570	E	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 CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_133	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 13:29	**Vial:**	15
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-003	**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)	4.531	+0.00	134210	1.2907	34		Y
Perfluorooctane sulfonic acid (PFOS)	4.641	-0.05	370076	5.5831	150		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.317	-0.01	2686214	6.7612	180		Y
Perfluoropentanoic acid (PFPeA)	3.924	+0.00	12446171	19.7009	530	E	Y
Perfluorohexanoic acid (PFHxA)	4.189	+0.00	14444678	18.3769	490	E	Y
Perfluoroheptanoic acid (PFHpA)	4.374	+0.01	6400244	11.2601	300		Y
Perfluorooctanoic acid (PFOA)	4.541	+0.00	3184475	4.9471	130		Y
Perfluorononanoic acid (PFNA)	4.711	+0.00	473138	1.0292	27		Y
Perfluorodecanoic acid (PFDA)	4.896	+0.00	22139	0.0470	1.3	J	Y
Perfluoroundecanoic acid (PFUnDA)	5.078	+0.00	21134	0.0536	1.4	U	Y
Perfluorododecanoic acid (PFDoDA)	5.249	0.00	1665	0.0138	0.37	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.405	-0.02	2084	0.0023	0.061	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.582	+0.01	15184	-0.0193	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.233	+0.01	2027	0.0073	0.19	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.530	+0.00	339309	3.8654	100		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.893	+0.00	30228	0.5390	14		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

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Insight Report

Printed at 1/18/2019 10:42:01 AM

010419_133

Sample ID: K1812302-003
Date acquired: 1/5/2019 1:29:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_133.lcd
Vial: 35 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.316	2252431	2252431	2	5.0000	ng/mL	----
PFBA-13C	M	3.316	2251423	3962089	26	4.4284	ng/mL	----
PFBA	M	3.317	2686214	2252431	2	6.7612	ng/mL	----
PFPeA-13C_IS	Auto	3.923	1288847	1288847	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.923	1288847	3962089	26	4.5492	ng/mL	----
PFPeA	Auto	3.924	12446171	1288847	4	19.7009	ng/mL	----
PFBS_1	Auto	3.978	954201	620055	16	7.5545	ng/mL	----
PFBS-13C	Auto	3.979	620055	3962089	26	3.9106	ng/mL	----
PFBS-13C_IS	Auto	3.979	620055	620055	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.189	4458345	4458345	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.189	4458345	3962089	26	4.7125	ng/mL	----
PFHxA	Auto	4.189	14444678	4458345	6	18.3769	ng/mL	----
PFHpA	Auto	4.374	6400244	2661814	8	11.2601	ng/mL	----
PFHpA-13C_IS	Auto	4.373	2661814	2661814	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.373	2661814	3962089	26	3.7507	ng/mL	----
PFHxS-18O_IS	Auto	4.372	515886	515886	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.372	515886	3962089	26	4.7160	ng/mL	----
PFHxS_1	Auto	4.369	2138701	515886	7	21.5161	ng/mL	----
6_2-FTS-13C	Auto	4.530	475056	3962089	26	4.8270	ng/mL	----
6_2-FTS-13C_IS	Auto	4.530	475056	475056	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.530	339309	475056	10	3.8654	ng/mL	----
PFHpS_1	M	4.531	134210	515886	7	1.2907	ng/mL	----
PFOA-13C_IS	Auto	4.541	3925929	3925929	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.541	3925929	3962089	26	4.1501	ng/mL	----
PFOA	Auto	4.541	3184475	3925929	9	4.9471	ng/mL	----
PFOS_1	Auto	4.641	370076	449457	13	5.5831	ng/mL	----
PFOS-13C_IS	Auto	4.696	449457	449457	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.696	449457	3962089	26	3.9367	ng/mL	----
PFNA-13C_IS	Auto	4.711	3460879	3460879	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.711	3460879	3962089	26	4.3969	ng/mL	----
PFNA	Auto	4.711	473138	3460879	11	1.0292	ng/mL	----
PFDA-13C_IS	Auto	4.896	2816170	2816170	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.896	2816170	3962089	26	4.0984	ng/mL	----
PFDA	Auto	4.896	22139	2816170	12	0.0470	ng/mL	----
8_2-FTS-13C_IS	Auto	4.893	318126	318126	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.893	318126	3962089	26	4.1564	ng/mL	----
8_2-FTS_1	Auto	4.893	30228	318126	15	0.5390	ng/mL	----
PFDS_1	ND(W/B)	----	----	449457	13	----	ng/mL	----
PFUnA	Auto	5.078	21134	2425747	14	0.0536	ng/mL	----
PFUnA-13C_IS	Auto	5.079	2425747	2425747	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.079	2425747	3962089	26	3.7729	ng/mL	----
PFDoA	Auto	5.249	1665	3618061	17	0.0138	ng/mL	----
PFDoA-13C	Auto	5.259	3618061	3962089	26	3.8784	ng/mL	----
PFDoA-13C_IS	Auto	5.259	3618061	3618061	17	5.0000	ng/mL	----
PFTrDA	M	5.405	2084	2689958	22	0.0023	ng/mL	----
PFTeDA	Auto	5.582	15184	2689958	22	-0.0193	ng/mL	----
PFTeDA-13C	Auto	5.581	2689958	3962089	26	4.0298	ng/mL	----
PFTeDA-13C_IS	Auto	5.581	2689958	2689958	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.236	1044108	1044108	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.236	1044108	3962089	26	3.4371	ng/mL	----
FOSA	M	5.233	2027	1044108	18	0.0073	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	382090	19	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.002	382090	3962089	26	3.1781	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.002	382090	382090	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.627	279157	279157	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.627	279157	3962089	26	3.2294	ng/mL	----
N-MeFOSA	M	5.634	737	279157	1	0.0100	ng/mL	----
N-MeFOSE-d7	Auto	5.598	496789	3962089	26	3.9562	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.598	496789	496789	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	496789	20	----	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	375933	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.099	375933	375933	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.099	375933	3962089	26	3.2570	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.765	477970	477970	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.765	477970	3962089	26	3.2975	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	477970	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.731	524258	524258	24	5.0000	ng/mL	----

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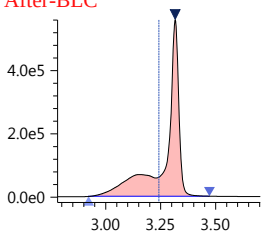
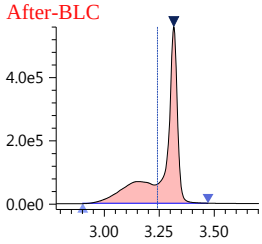
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.731	524258	3962089	26	3.8684	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	524258	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.079	3962089	3962089	26	5.0000	ng/mL	----

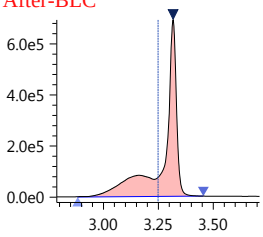
PFBA-13C_IS
Conc 5.0000
RT 3.316 Area 2252431
ISTD 216.90>172.15 (-) 5.60e5
After-BLC



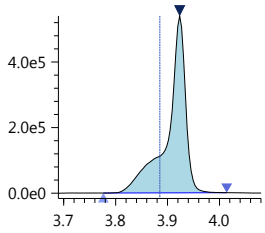
PFBA-13C
Conc 4.4284
RT 3.316 Area 2251423
Q 216.90>172.15 (-) 5.60e5
After-BLC



PFBA
Conc 6.7612
RT 3.317 Area 2686214
Q 213.00>169.10 (-) 6.94e5
After-BLC



PFPeA-13C_IS
Conc 5.0000
RT 3.923 Area 1288847
ISTD 267.90>223.00 (-) 5.41e5



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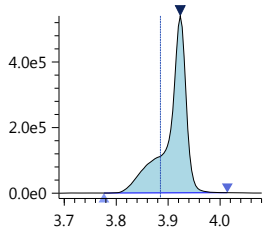
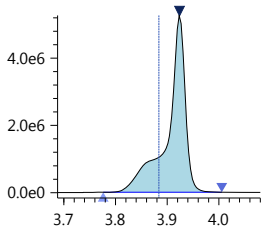
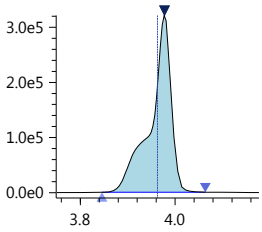
Conc 4.5492
RT 3.923 Area 1288847
Q 267.90>223.00 (-) 5.41e5



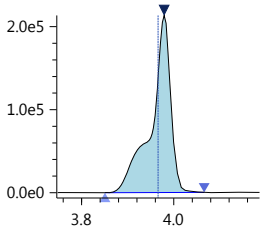
PFPeA
Conc 19.7009
RT 3.924 Area 12446171
Q 263.05>219.10 (-) 5.27e6



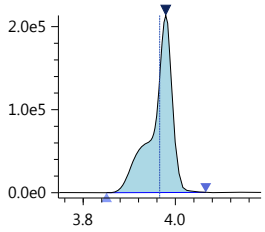
PFBS_1
Conc 7.5545
RT 3.978 Area 954201
Q 299.00>80.00 (-) 3.22e5



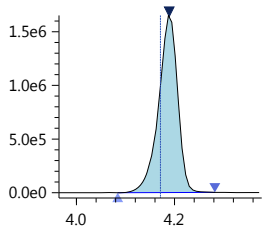
PFBS-13C
Conc 3.9106
RT 3.979 Area 620055
Q 301.80>80.00 (-) 2.14e5



PFBS-13C_IS
Conc 5.0000
RT 3.979 Area 620055
ISTD 301.80>80.00 (-) 2.14e5



PFHxA-13C_IS
Conc 5.0000
RT 4.189 Area 4458345
ISTD 314.90>270.10 (-) 1.65e6



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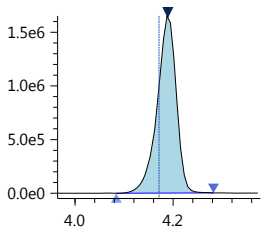
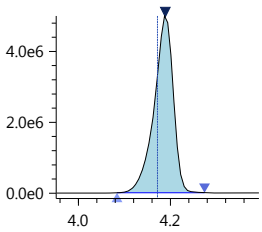
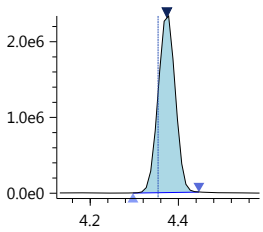
Conc 4.7125
RT 4.189 Area 4458345
Q 314.90>270.10 (-) 1.65e6



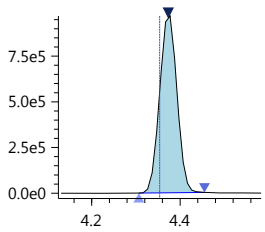
PFHxA
Conc 18.3769
RT 4.189 Area 14444678
Q 313.00>269.00 (-) 5.00e6



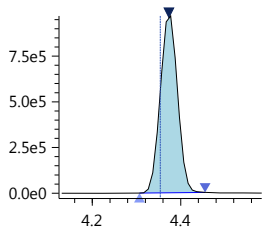
PFHpA
Conc 11.2601
RT 4.374 Area 6400244
Q 362.90>319.00 (-) 2.34e6



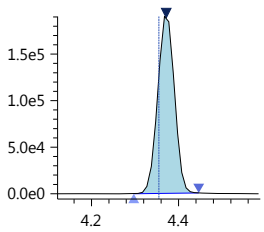
PFHpA-13C_IS
Conc 5.0000
RT 4.373 Area 2661814
ISTD 366.90>322.10 (-) 9.70e5



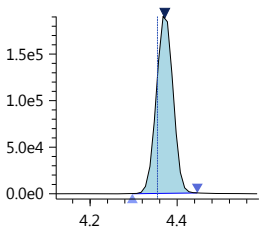
PFHpA-13C
Conc 3.7507
RT 4.373 Area 2661814
Q 366.90>322.10 (-) 9.70e5



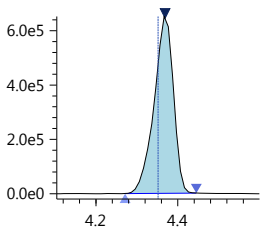
PFHxS-18O_IS
Conc 5.0000
RT 4.372 Area 515886
ISTD 402.70>84.05 (-) 1.90e5



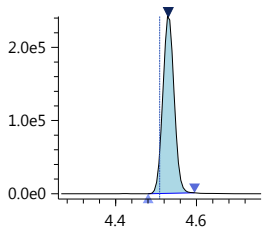
PFHxS-18O
Conc 4.7160
RT 4.372 Area 515886
Q 402.70>84.05 (-) 1.90e5



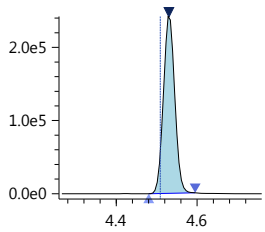
PFHxS_1
Conc 21.5161
RT 4.369 Area 2138701
Q 399.00>80.00 (-) 6.52e5



6_2-FTS-13C
Conc 4.8270
RT 4.530 Area 475056
Q 428.90>409.00 (-) 2.42e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.530 Area 475056
ISTD 428.90>409.00 (-) 2.42e5



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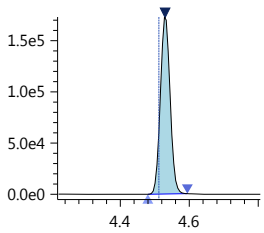
6_2-FTS_1
Conc 3.8654
RT 4.530 Area 339309
Q 427.00>407.00 (-) 1.73e5



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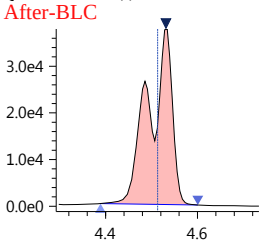
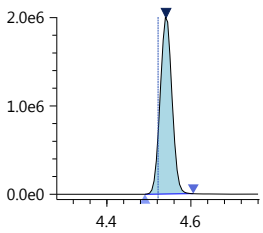
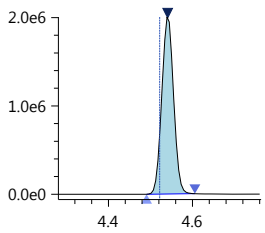
Conc 1.2907
RT 4.531 Area 134210
Q 449.00>80.15 (-) 3.80e4



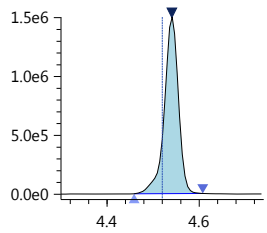
PFOA-13C_IS
Conc 5.0000
RT 4.541 Area 3925929
ISTD 416.80>372.05 (-) 2.01e6



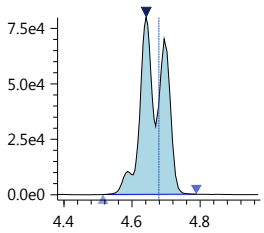
PFOA-13C
Conc 4.1501
RT 4.541 Area 3925929
Q 416.80>372.05 (-) 2.01e6



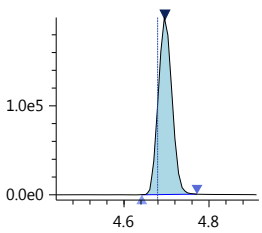
PFOA
Conc 4.9471
RT 4.541 Area 3184475
Q 413.00>369.00 (-) 1.51e6



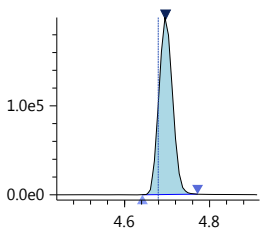
PFOS_1
Conc 5.5831
RT 4.641 Area 370076
Q 499.00>80.00 (-) 7.99e4



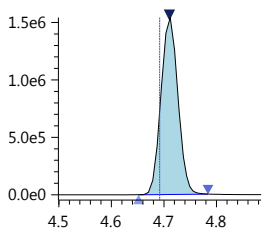
PFOS-13C_IS
Conc 5.0000
RT 4.696 Area 449457
ISTD 502.80>80.05 (-) 1.99e5



PFOS-13C
Conc 3.9367
RT 4.696 Area 449457
Q 502.80>80.05 (-) 1.99e5



PFNA-13C_IS
Conc 5.0000
RT 4.711 Area 3460879
ISTD 467.80>423.00 (-) 1.54e6



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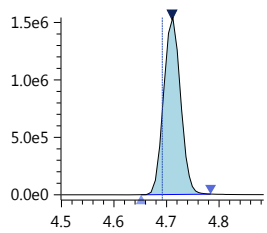
Conc 4.3969
RT 4.711 Area 3460879
Q 467.80>423.00 (-) 1.54e6



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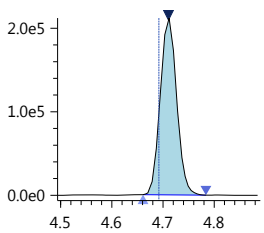
Conc 1.0292
RT 4.711 Area 473138
Q 463.00>418.90 (-) 2.12e5



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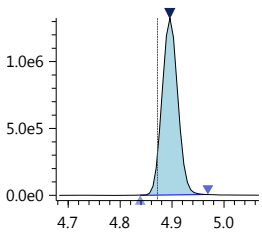
Conc 5.0000
RT 4.896 Area 2816170
ISTD 514.80>469.95 (-) 1.33e6



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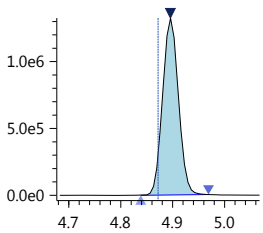
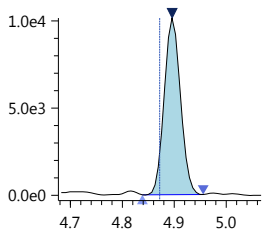
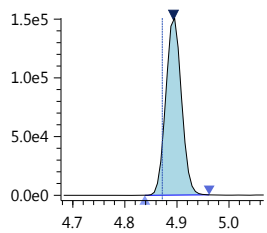
Conc 4.0984
RT 4.896 Area 2816170
Q 514.80>469.95 (-) 1.33e6



PFDA
Conc 0.0470
RT 4.896 Area 22139
Q 513.00>468.80 (-) 1.02e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.893 Area 318126
ISTD 528.80>509.00 (-) 1.51e5



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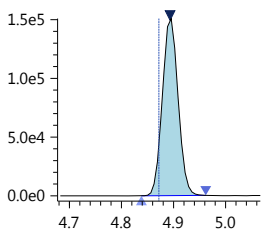
Conc 4.1564
RT 4.893 Area 318126
Q 528.80>509.00 (-) 1.51e5



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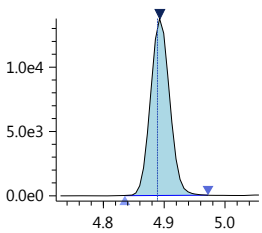
RT 4.893 Area 30228
Q 527.10>506.90 (-) 1.38e4



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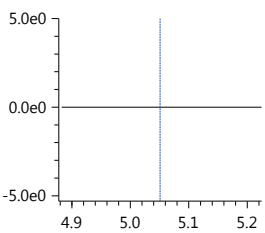
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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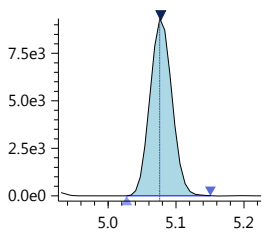
Conc 0.0536
RT 5.078 Area 21134
Q 563.00>518.90 (-) 9.33e3



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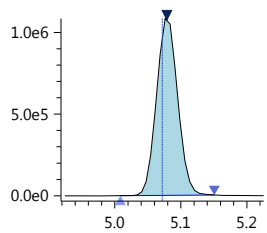
RT 5.079 Area 2425747
ISTD 564.80>519.95 (-) 1.08e6



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PFUnA-13C
Conc 3.7729
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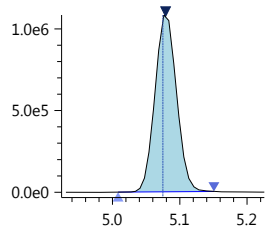
Q 564.80>519.95 (-) 1.08e6



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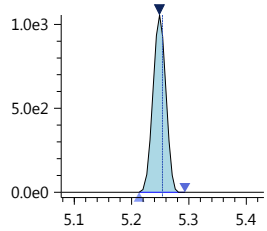
Conc 0.0138
RT 5.249 Area 1665
Q 613.05>569.00 (-) 1.06e3



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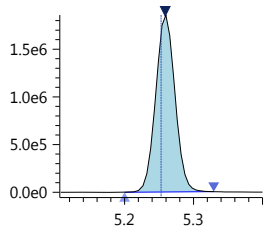
Conc 3.8784
RT 5.259 Area 3618061
Q 614.80>569.95 (-) 1.86e6



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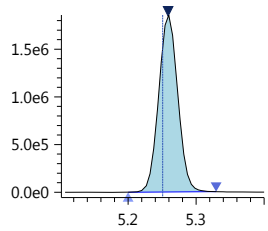

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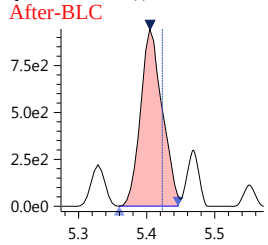

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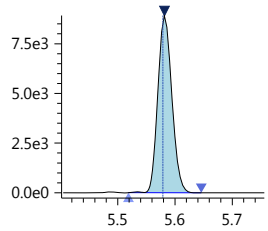
Q 713.40>669.00 (-) 8.92e3



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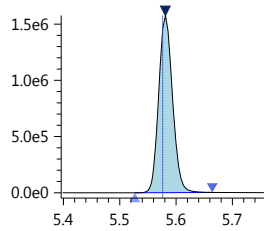
RT 5.581 Area 2689958
Q 714.70>669.90 (-) 1.58e6



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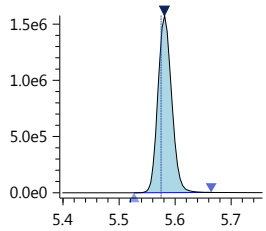

FOSA-13C_IS
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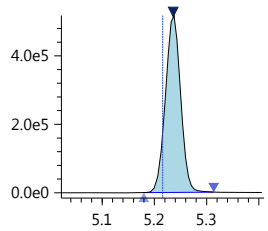
RT 5.236 Area 1044108
ISTD 506.00>78.05 (-) 5.18e5



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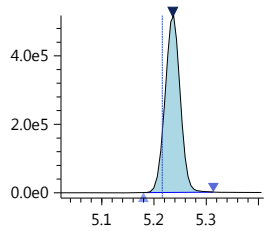
Q 506.00>78.05 (-) 5.18e5



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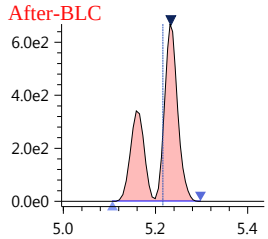
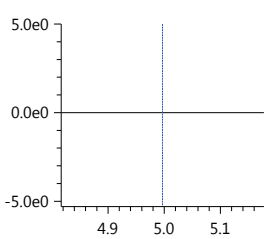
Q 498.20>78.00 (-) 6.69e2



N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



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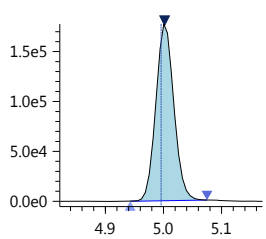
Conc 3.1781
RT 5.002 Area 382090
Q 572.80>419.05 (-) 1.78e5



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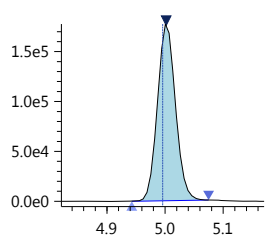
RT 5.002 Area 382090
ISTD 572.80>419.05 (-) 1.78e5



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Conc 5.0000
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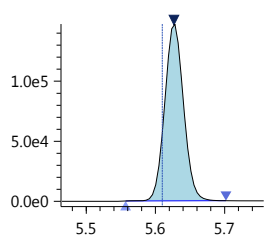
ISTD 514.90>168.90 (-) 1.48e5



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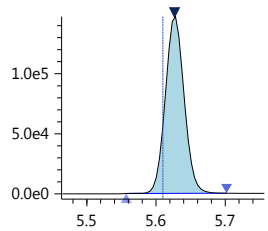
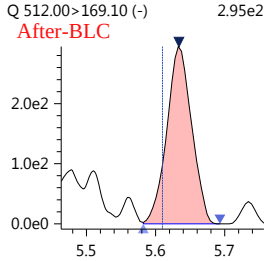
RT 5.627 Area 279157
Q 514.90>168.90 (-) 1.48e5



N-MeFOSA
Conc 0.0100
RT 5.634 Area 737
Q 512.00>169.10 (-) 2.95e2



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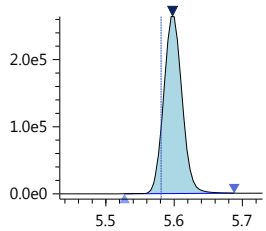
Conc 3.9562
RT 5.598 Area 496789
Q 622.70>59.10 (-) 2.64e5



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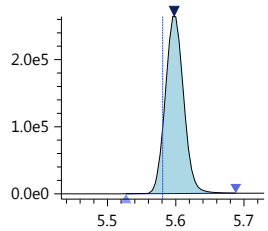
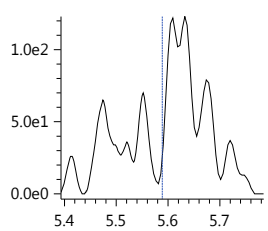


N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 1.23e2



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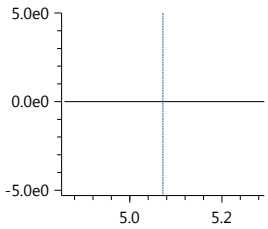
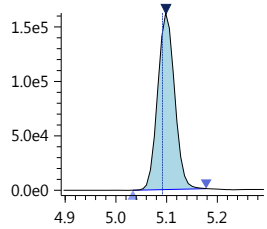
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.099 Area 375933
ISTD 588.80>419.00 (-) 1.63e5



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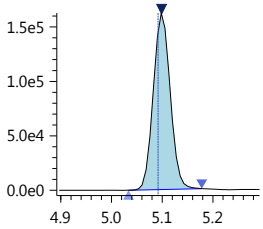
Conc 3.2570
RT 5.099 Area 375933
Q 588.80>419.00 (-) 1.63e5



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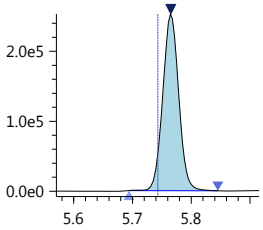

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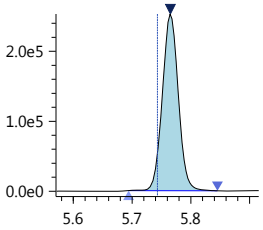
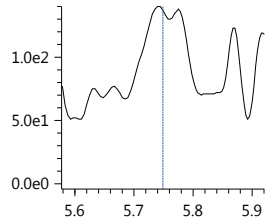
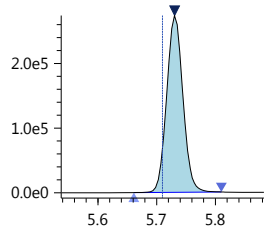
RT 5.765 Area 477970
Q 530.90>169.15 (-) 2.53e5



N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.40e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.731 Area 524258
ISTD 638.70>59.10 (-) 2.74e5



N-EtFOSE-d9
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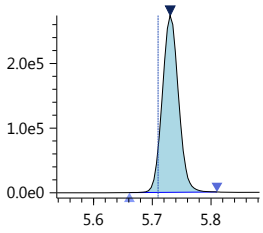
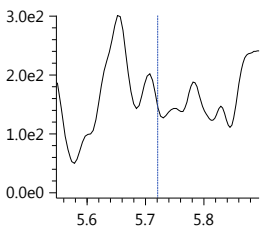
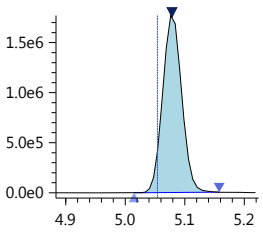
Q 638.70>59.10 (-) 2.74e5



N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 3.01e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.079 Area 3962089
ISTD 570.00>525.00 (-) 1.77e6



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010419_133

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Acquired by: System Administrator
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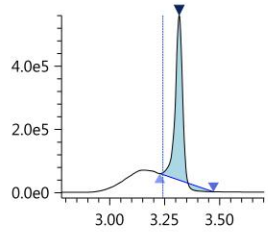
Vial: 35 | Inj. Volume: 15.0000uL | Tray: 4

PFBA-13C_IS
Conc 5.0000
RT 3.316 Area 1125312
ISTD 216.90>172.15 (-) 5.60e5



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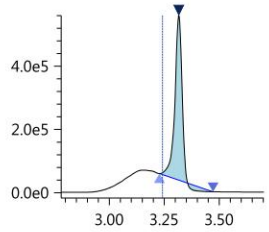

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Conc 9.1080
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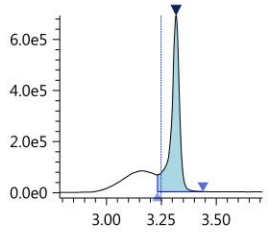
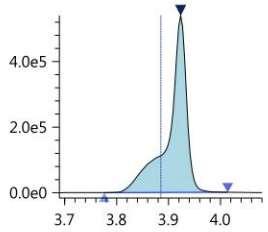
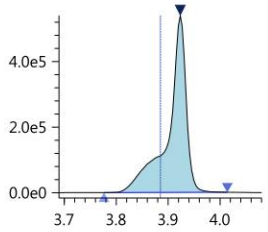
Q 213.00>169.10 (-) 6.94e5



PFPeA-13C_IS
Conc 5.0000
RT 3.923 Area 1288847
ISTD 267.90>223.00 (-) 5.41e5



PFPeA-13C
Conc 4.5492
RT 3.923 Area 1288847
Q 267.90>223.00 (-) 5.41e5



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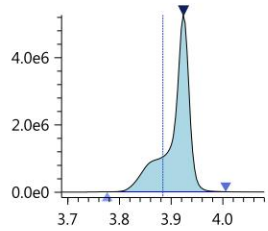
Conc 19.7009
RT 3.924 Area 12446171
Q 263.05>219.10 (-) 5.27e6



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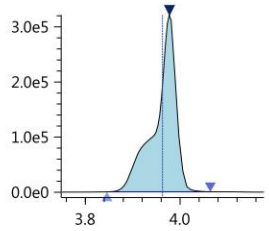
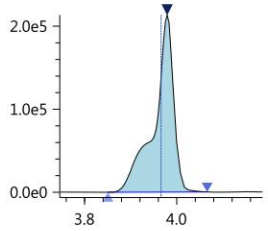
Conc 7.5545
RT 3.978 Area 954201
Q 299.00>80.00 (-) 3.22e5



PFBS-13C
Conc 3.9106
RT 3.979 Area 620055
Q 301.80>80.00 (-) 2.14e5



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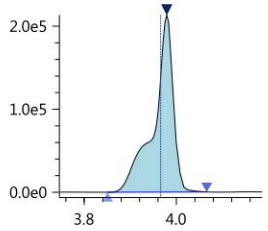
RT 3.979 Area 620055
ISTD 301.80>80.00 (-) 2.14e5



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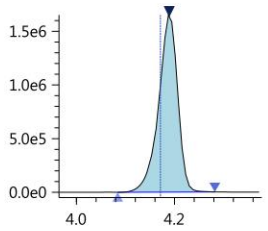
RT 4.189 Area 4458345
ISTD 314.90>270.10 (-) 1.65e6



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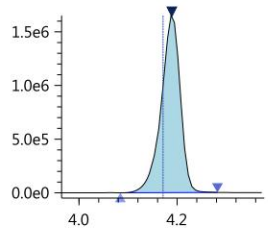
Conc 4.7125
RT 4.189 Area 4458345
Q 314.90>270.10 (-) 1.65e6



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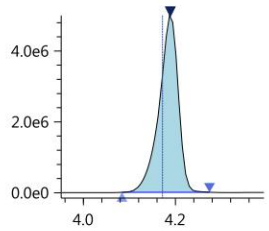
Conc 18.3769
RT 4.189 Area 14444678
Q 313.00>269.00 (-) 5.00e6



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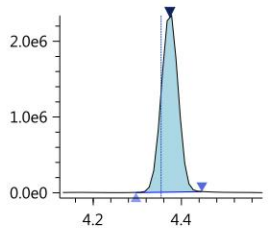
Conc 11.2601
RT 4.374 Area 6400244
Q 362.90>319.00 (-) 2.34e6



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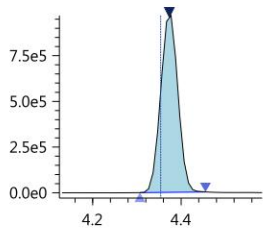
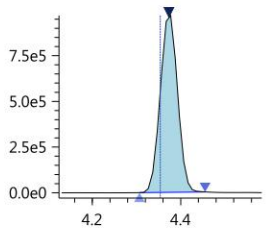
Conc 5.0000
RT 4.373 Area 2661814
ISTD 366.90>322.10 (-) 9.70e5



PFHpA-13C
Conc 3.7507
RT 4.373 Area 2661814
Q 366.90>322.10 (-) 9.70e5



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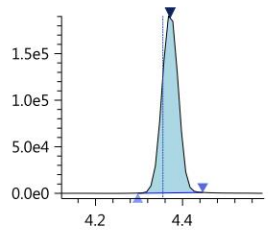
Conc 5.0000
RT 4.372 Area 515886
ISTD 402.70>84.05 (-) 1.90e5



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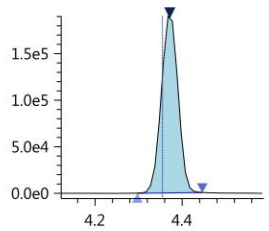
RT 4.372 Area 515886
Q 402.70>84.05 (-) 1.90e5



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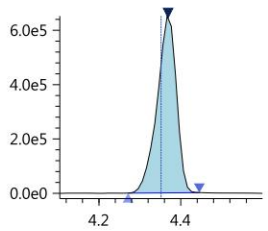
RT 4.369 Area 2138701
Q 399.00>80.00 (-) 6.52e5



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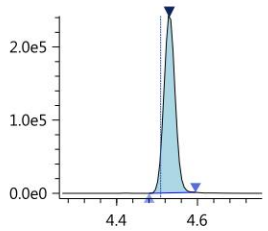
Conc 4.8270
RT 4.530 Area 475056
Q 428.90>409.00 (-) 2.42e5



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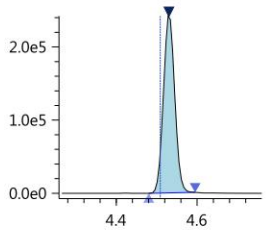
ISTD 428.90>409.00 (-) 2.42e5



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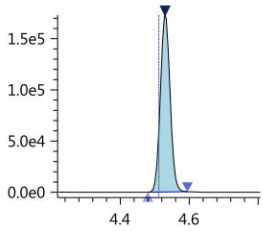
6_2-FTS_1
Conc 3.8654
RT 4.530 Area 339309
Q 427.00>407.00 (-) 1.73e5



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Conc 0.7234
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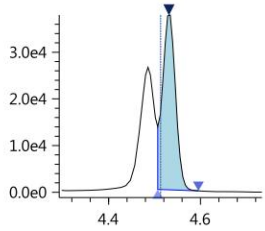
Q 449.00>80.15 (-) 3.80e4



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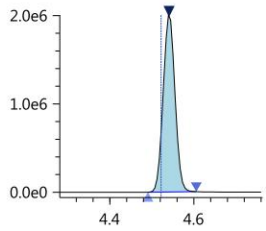
RT 4.541 Area 3925929
ISTD 416.80>372.05 (-) 2.01e6



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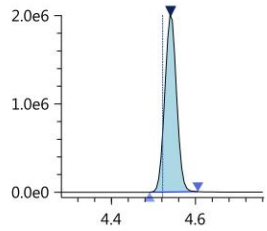

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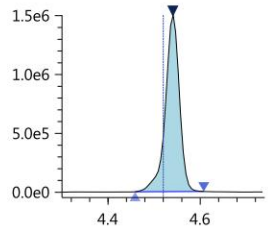

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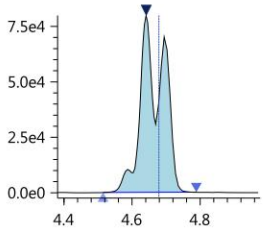
RT 4.641 Area 370076
Q 499.00>80.00 (-) 7.99e4



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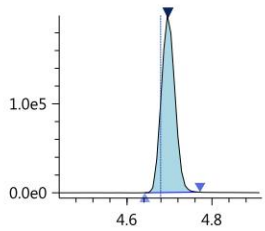
Conc 5.0000
RT 4.696 Area 449457
ISTD 502.80>80.05 (-) 1.99e5



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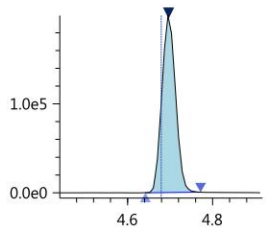

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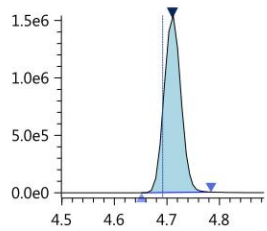
RT 4.711 Area 3460879
ISTD 467.80>423.00 (-) 1.54e6



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RT 4.711 Area 3460879
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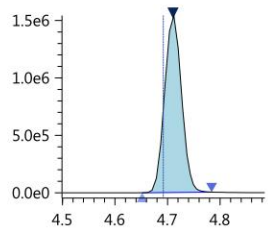

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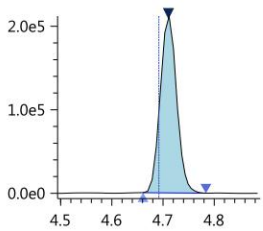
RT 4.711 Area 473138
Q 463.00>418.90 (-) 2.12e5



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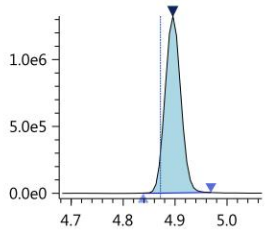
ISTD 514.80>469.95 (-) 1.33e6



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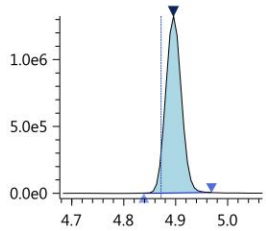
Q 514.80>469.95 (-) 1.33e6



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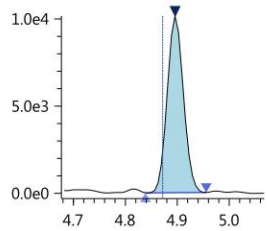
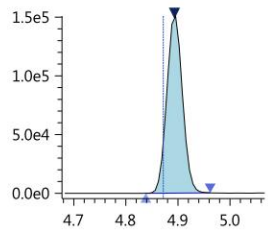
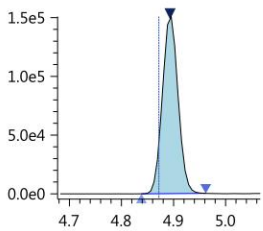
Conc 0.0470
RT 4.896 Area 22139
Q 513.00>468.80 (-) 1.02e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.893 Area 318126
ISTD 528.80>509.00 (-) 1.51e5



8_2-FTS-13C
Conc 4.1564
RT 4.893 Area 318126
Q 528.80>509.00 (-) 1.51e5



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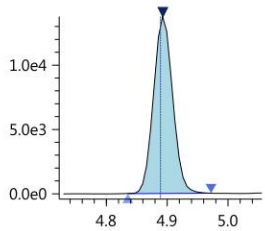
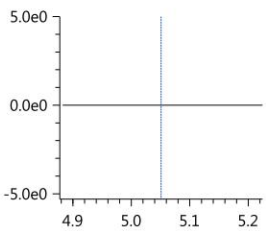
RT 4.893 Area 30228
Q 527.10>506.90 (-) 1.38e4



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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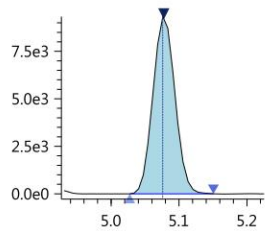
Conc 0.0536
RT 5.078 Area 21134
Q 563.00>518.90 (-) 9.33e3



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Conc 5.0000
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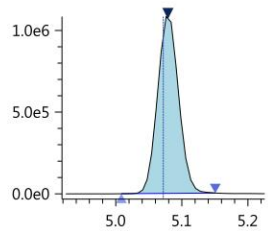
ISTD 564.80>519.95 (-) 1.08e6



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PFUnA-13C
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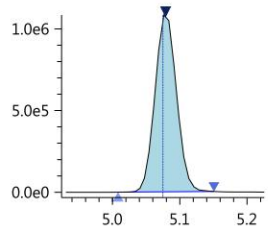
Q 564.80>519.95 (-) 1.08e6



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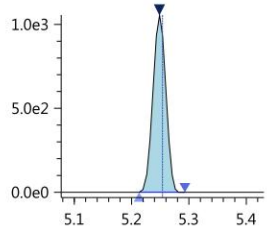
RT 5.249 Area 1665
Q 613.05>569.00 (-) 1.06e3



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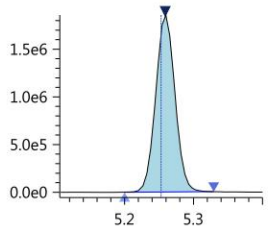
Conc 3.8784
RT 5.259 Area 3618061
Q 614.80>569.95 (-) 1.86e6



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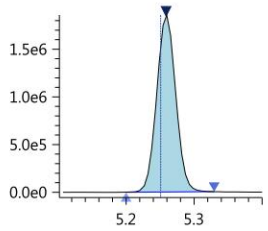
RT 5.259 Area 3618061
ISTD 614.80>569.95 (-) 1.86e6



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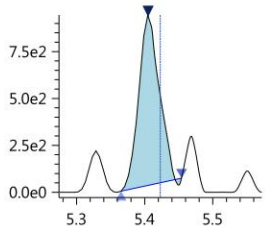
Q 663.00>618.90 (-) 9.45e2



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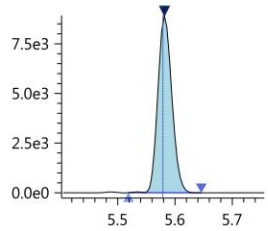
RT 5.582 Area 15184
Q 713.40>669.00 (-) 8.92e3



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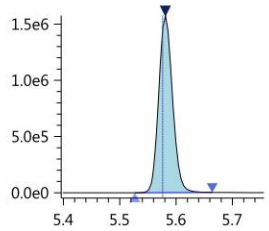
Conc 4.0298
RT 5.581 Area 2689958
Q 714.70>669.90 (-) 1.58e6



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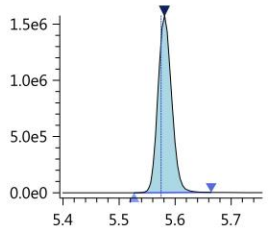
ISTD 714.70>669.90 (-) 1.58e6



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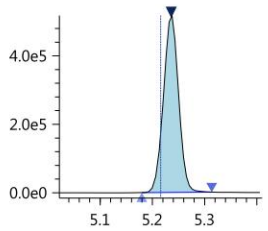
Conc 5.0000
RT 5.236 Area 1044108
ISTD 506.00>78.05 (-) 5.18e5



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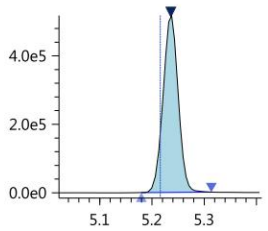
Q 506.00>78.05 (-) 5.18e5



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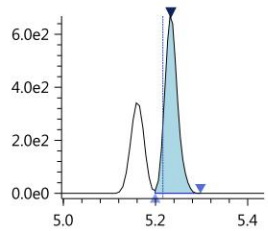
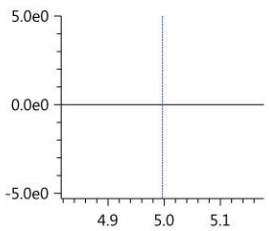
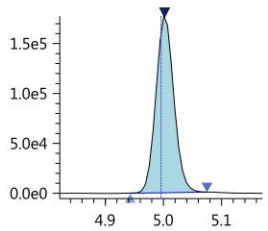
Q 498.20>78.00 (-) 6.69e2



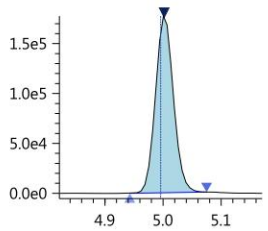
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



N-MeFOSAA-d3
Conc 3.1781
RT 5.002 Area 382090
Q 572.80>419.05 (-) 1.78e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.002 Area 382090
ISTD 572.80>419.05 (-) 1.78e5



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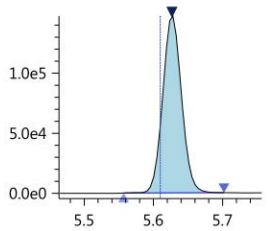
Conc 5.0000
RT 5.627 Area 279157
ISTD 514.90>168.90 (-) 1.48e5



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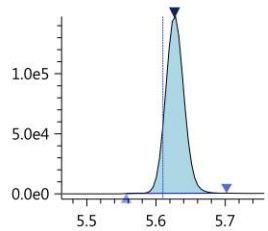
Conc 3.2294
RT 5.627 Area 279157
Q 514.90>168.90 (-) 1.48e5



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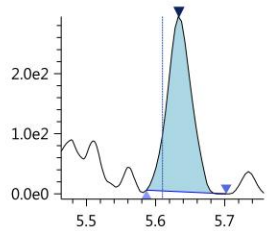
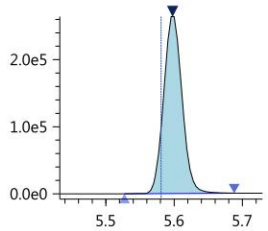
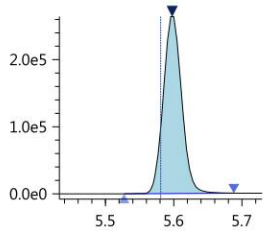
Conc 0.0097
RT 5.634 Area 715
Q 512.00>169.10 (-) 2.95e2



N-MeFOSE-d7
Conc 3.9562
RT 5.598 Area 496789
Q 622.70>59.10 (-) 2.64e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.598 Area 496789
ISTD 622.70>59.10 (-) 2.64e5



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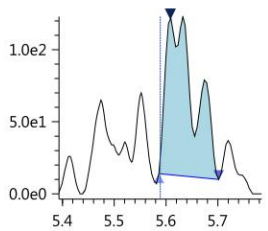
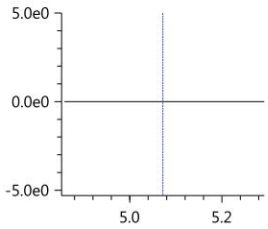
Conc 0.0030
RT 5.608 Area 430
Q 616.00>59.00 (-) 1.23e2



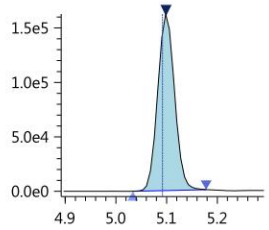
Insight Report

Printed at 1/18/2019 8:51:07 AM

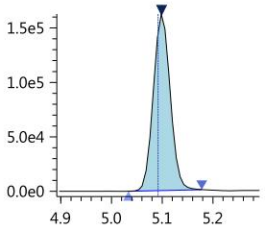
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



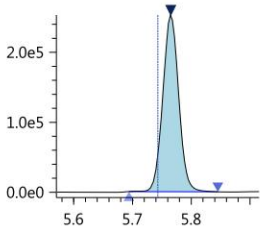
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.099 Area 375933
ISTD 588.80>419.00 (-) 1.63e5



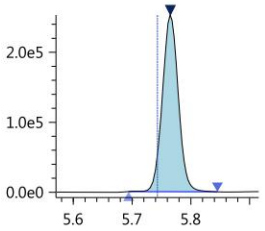
N-EtFOSAA-d5
Conc 3.2570
RT 5.099 Area 375933
Q 588.80>419.00 (-) 1.63e5



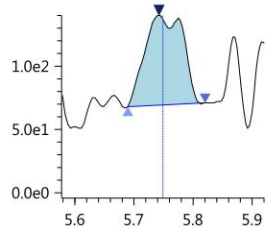
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.765 Area 477970
ISTD 530.90>169.15 (-) 2.53e5



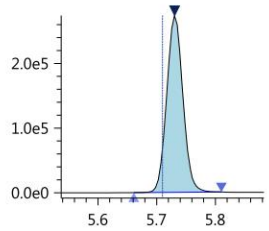
N-EtFOSA-d9
Conc 3.2975
RT 5.765 Area 477970
Q 530.90>169.15 (-) 2.53e5



N-EtFOSA
Conc 0.0188
RT 5.742 Area 319
Q 526.90>169.10 (-) 1.40e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.731 Area 524258
ISTD 638.70>59.10 (-) 2.74e5



N-EtFOSE-d9
Conc 3.8684
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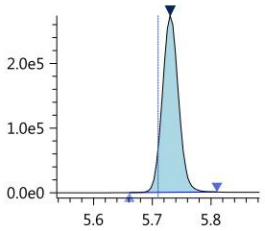
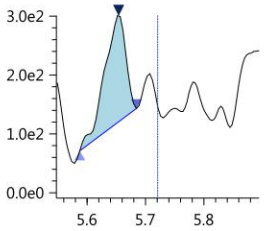
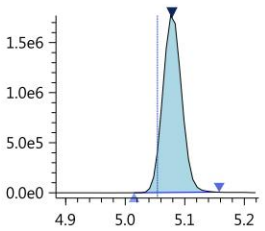
Q 638.70>59.10 (-) 2.74e5



N-EtFOSE
Conc 0.0036
RT 5.654 Area 460
Q 630.00>58.90 (-) 3.01e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.079 Area 3962089
ISTD 570.00>525.00 (-) 1.77e6



1st CM 01/28/19
2nd 01/29/19

Validation Report

Data File: J:\LCMS06\Data\190125_b6\190125_077
Lab ID: K1812302-003
RunType: N/A
Matrix: Water

Date Acquired: 1/25/19 21:07
Batch ID: 623320
Analysis Method: PFC/537M/PFOA

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	
Duplicate 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: _____

Printed: 1/28/19 12:39
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Secondary Review: _____

1st CM 01/28/19
2nd 01/29/19

Quantitation Report

Data File:	J:\LCMS06\Data\190125_b6\190125_077	**Instrument:**	K-LCMS-06
Acqu Date:	1/25/19 21:07	**Vial:**	7
Run Type:	N/A	**Dilution:**	5
Lab ID:	K1812302-003	**Raw Units:**	ng/mL

Bottle ID:	K1812302-003.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	623320	**Prep Lot:**	328931	**Report Group:**	K1812302
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900021
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.069	0.00	5400040	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
18O2-PFHxS	4.355	-0.01	119116	0.9913	99	26 - 122	Y
13C5-PFPeA	3.916	0.00	327966	0.9241	92	27 - 138	Y
13C2-PFHxA	4.177	0.00	1052553	0.8717	87	28 - 132	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorohexane sulfonic acid (PFHxS)	4.347	-0.01	538139	22.7364	610		Y
Perfluoropentanoic acid (PFPeA)	3.916	0.00	3031023	18.4163	490		Y
Perfluorohexanoic acid (PFHxA)	4.178	0.00	3712562	19.0361	510		Y

Prep Amount:	300.0000 mL	**Dilution:**	5
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: 1/28/19 12:39
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Insight Report

Printed at 1/28/2019 12:22:54 PM

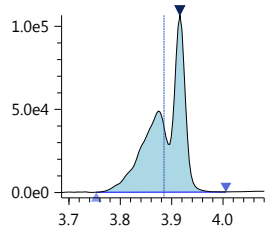
Batch File: ----
Method File: J:\LCMS06\Data\190125_b6\190125_b6.lcm
Project File: J:\LCMS06\Data\190125_b6\190125_b6.damlp
Flags File: J:\LCMS06\Data\190125_b6\190125_b6.damlp

190125_077

Sample ID: K1812302-003
Date acquired: 1/25/2019 9:07:37 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190125_b6\190125_077.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFPeA-13C_IS	Auto	3.916	327966	327966	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.916	327966	5400040	26	0.9241	ng/mL	----
PFPeA	Auto	3.916	3031023	327966	4	18.4163	ng/mL	----
PFHxA-13C_IS	Auto	4.177	1052553	1052553	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.177	1052553	5400040	26	0.8717	ng/mL	----
PFHxA	Auto	4.178	3712562	1052553	6	19.0361	ng/mL	----
PFHxS-18O_IS	Auto	4.355	119116	119116	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.355	119116	5400040	26	0.9913	ng/mL	----
PFHxS_1	Auto	4.347	538139	119116	7	22.7364	ng/mL	----

PFPeA-13C_IS
Conc 5.0000
RT 3.916 Area 327966
ISTD 267.90>223.00 (-) 1.07e5



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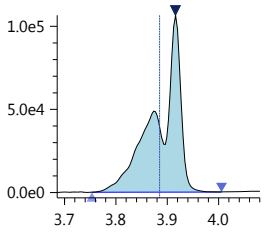
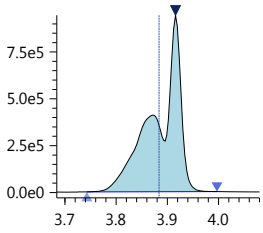
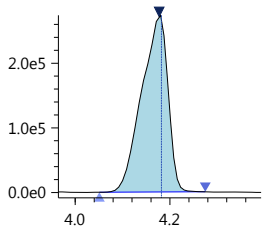
Conc 0.9241
RT 3.916 Area 327966
Q 267.90>223.00 (-) 1.07e5



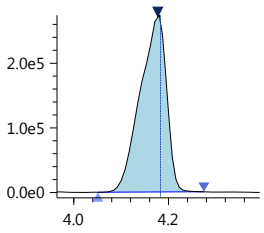
PFPeA
Conc 18.4163
RT 3.916 Area 3031023
Q 263.05>219.10 (-) 9.46e5



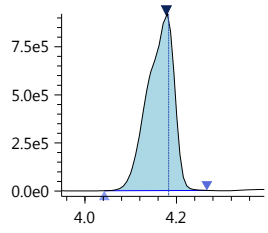
PFHxA-13C_IS
Conc 5.0000
RT 4.177 Area 1052553
ISTD 314.90>270.10 (-) 2.74e5



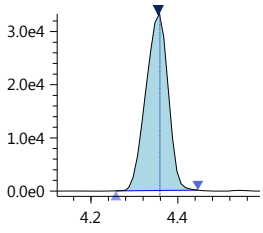
PFHxA-13C
Conc 0.8717
RT 4.177 Area 1052553
Q 314.90>270.10 (-) 2.74e5



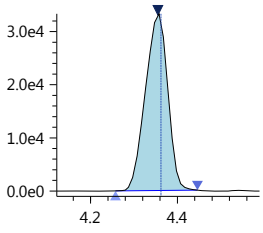
PFHxA
Conc 19.0361
RT 4.178 Area 3712562
Q 313.00>269.00 (-) 9.21e5



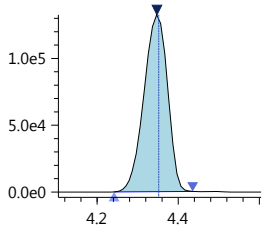
PFHxS-18O_IS
Conc 5.0000
RT 4.355 Area 119116
ISTD 402.70>84.05 (-) 3.33e4



PFHxS-18O
Conc 0.9913
RT 4.355 Area 119116
Q 402.70>84.05 (-) 3.33e4



PFHxS_1
Conc 22.7364
RT 4.347 Area 538139
Q 399.00>80.00 (-) 1.33e5



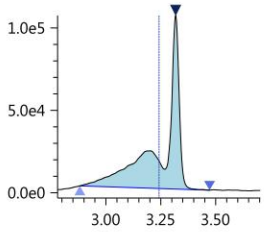
Insight Report

Printed at 1/28/2019 12:09:19 PM

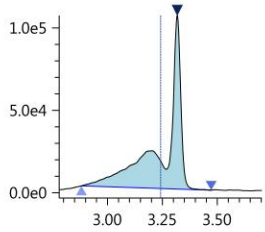
190125_077

Sample ID: K1812302-003
Date acquired: 1/25/2019 9:07:37 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190125_b6\190125_077.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 3

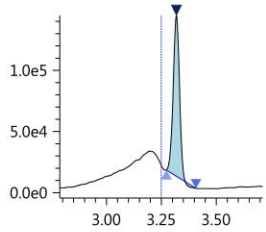
PFBA-13C_IS
Conc 5.0000
RT 3.318 Area 506736
ISTD 216.90>172.15 (-) 1.08e5



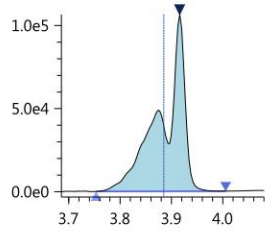
PFBA-13C
Conc 0.8694
RT 3.318 Area 506736
Q 216.90>172.15 (-) 1.08e5



PFBA
Conc 2.5677
RT 3.318 Area 258767
Q 213.00>169.10 (-) 1.45e5



PFPeA-13C_IS
Conc 5.0000
RT 3.916 Area 327966
ISTD 267.90>223.00 (-) 1.07e5



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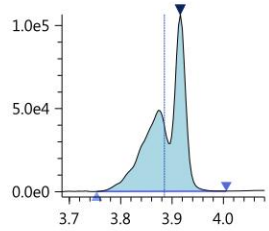
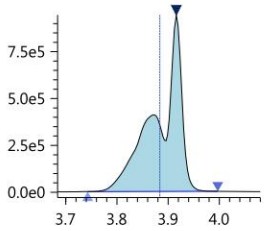
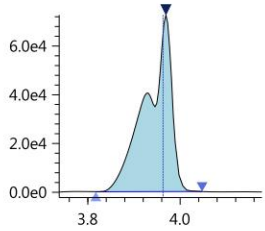
Conc 0.9241
RT 3.916 Area 327966
Q 267.90>223.00 (-) 1.07e5



PFPeA
Conc 18.4163
RT 3.916 Area 3031023
Q 263.05>219.10 (-) 9.46e5



PFBS_1
Conc 7.4045
RT 3.969 Area 275576
Q 299.00>80.00 (-) 7.27e4



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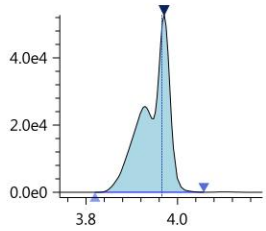
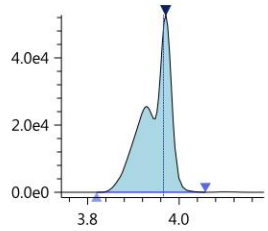
RT 3.971 Area 184985
Q 301.80>80.00 (-) 5.28e4



PFBS-13C_IS
Conc 5.0000
RT 3.971 Area 184985
ISTD 301.80>80.00 (-) 5.28e4



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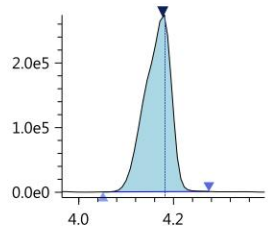
RT 4.177 Area 1052553
ISTD 314.90>270.10 (-) 2.74e5



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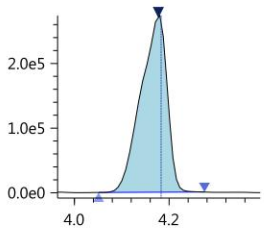
Conc 0.8717
RT 4.177 Area 1052553
Q 314.90>270.10 (-) 2.74e5



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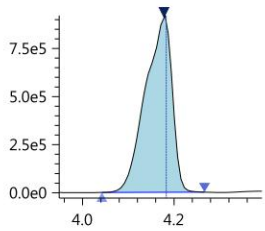
Conc 19.0361
RT 4.178 Area 3712562
Q 313.00>269.00 (-) 9.21e5



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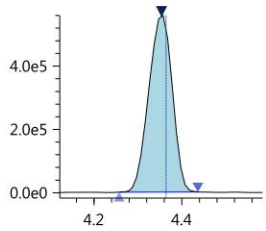
Conc 11.8745
RT 4.354 Area 2093743
Q 362.90>319.00 (-) 5.60e5



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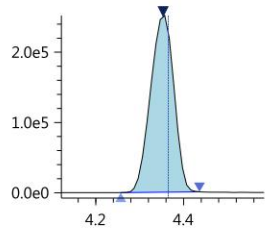
Conc 5.0000
RT 4.354 Area 939332
ISTD 366.90>322.10 (-) 2.52e5



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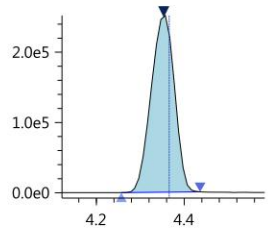
Q 366.90>322.10 (-) 2.52e5



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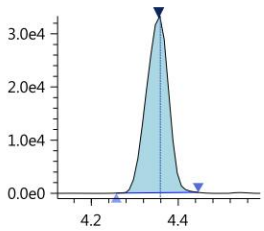
Conc 5.0000
RT 4.355 Area 119116
ISTD 402.70>84.05 (-) 3.33e4



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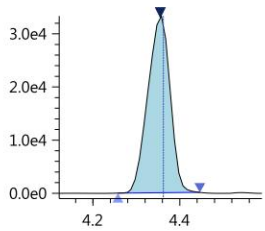
Conc 0.9913
RT 4.355 Area 119116
Q 402.70>84.05 (-) 3.33e4



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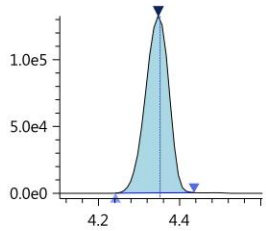
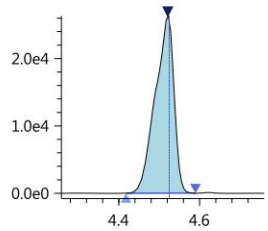
Conc 22.7364
RT 4.347 Area 538139
Q 399.00>80.00 (-) 1.33e5



6_2-FTS-13C
Conc 0.9968
RT 4.521 Area 84844
Q 428.90>409.00 (-) 2.63e4



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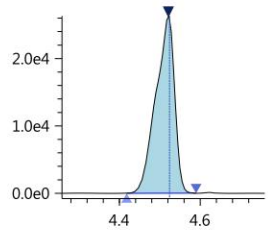
RT 4.521 Area 84844
ISTD 428.90>409.00 (-) 2.63e4



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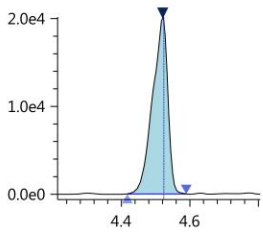
6_2-FTS_1
Conc 3.7215
RT 4.521 Area 62469
Q 427.00>407.00 (-) 2.02e4



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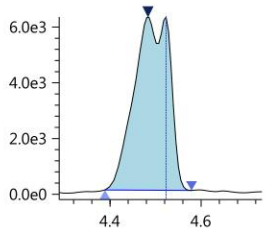
Conc 1.2055
RT 4.483 Area 34361
Q 449.00>80.15 (-) 6.36e3



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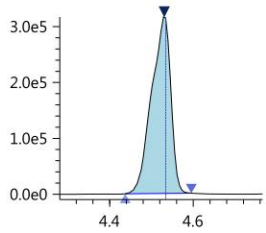
Conc 5.0000
RT 4.531 Area 1013093
ISTD 416.80>372.05 (-) 3.17e5



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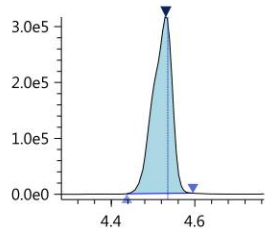
Q 416.80>372.05 (-) 3.17e5



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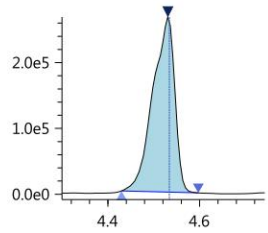
Q 413.00>369.00 (-) 2.69e5



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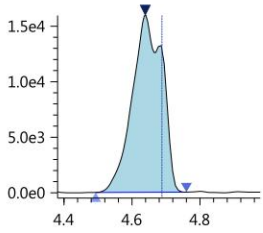
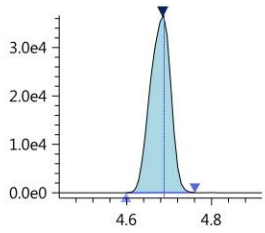
Conc 5.5151
RT 4.639 Area 99394
Q 499.00>80.00 (-) 1.60e4



PFOS-13C_IS
Conc 5.0000
RT 4.685 Area 125876
ISTD 502.80>80.05 (-) 3.66e4



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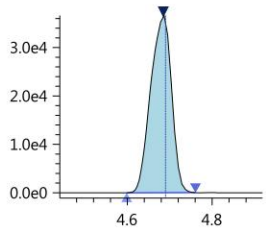
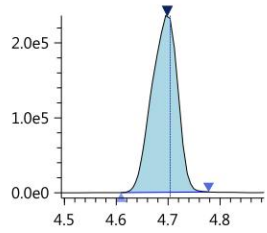
Conc 0.9291
RT 4.685 Area 125876
Q 502.80>80.05 (-) 3.66e4



PFNA-13C_IS
Conc 5.0000
RT 4.698 Area 829202
ISTD 467.80>423.00 (-) 2.37e5



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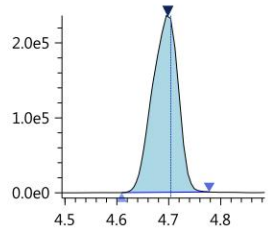
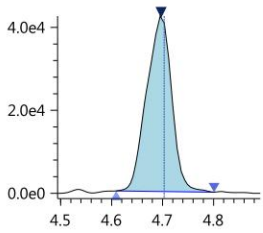
RT 4.698 Area 829202
Q 467.80>423.00 (-) 2.37e5



PFNA
Conc 1.2370
RT 4.697 Area 144568
Q 463.00>418.90 (-) 4.27e4



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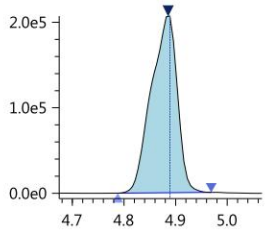
ISTD 514.80>469.95 (-) 2.07e5



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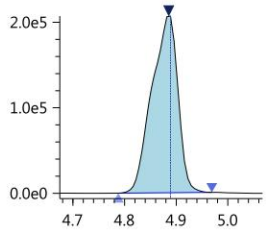
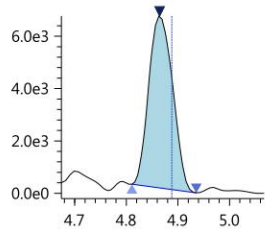
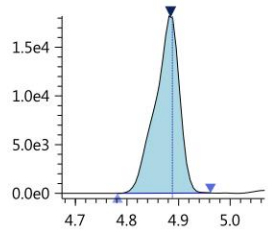
Q 514.80>469.95 (-) 2.07e5



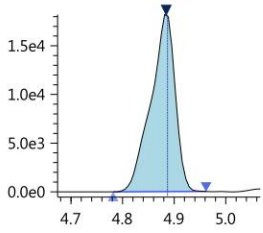
PFDA
Conc 0.1730
RT 4.864 Area 21290
Q 513.00>468.80 (-) 6.77e3



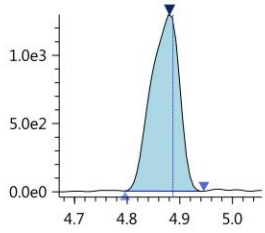
8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 59722
ISTD 528.80>509.00 (-) 1.82e4



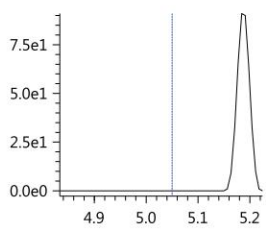
8_2-FTS-13C
Conc 0.8900
RT 4.884 Area 59722
Q 528.80>509.00 (-) 1.82e4



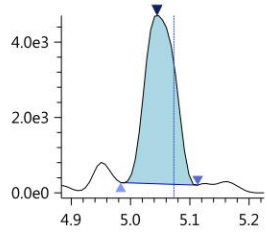
8_2-FTS_1
Conc 0.5170
RT 4.881 Area 4903
Q 527.10>506.90 (-) 1.30e3



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 9.10e1



PFUnA
Conc 0.1620
RT 5.045 Area 16155
Q 563.00>518.90 (-) 4.70e3



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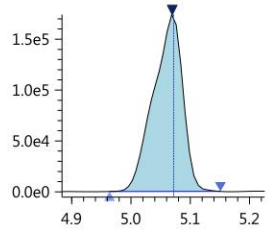
Conc 5.0000
RT 5.070 Area 597520
ISTD 564.80>519.95 (-) 1.74e5



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PFUnA-13C
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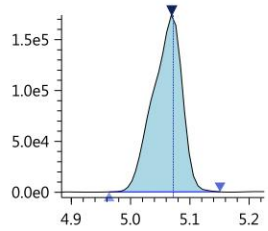
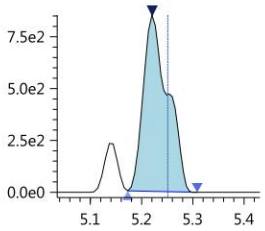
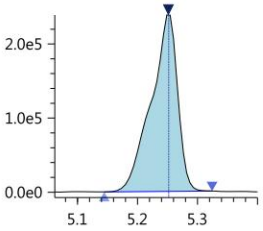
Q 564.80>519.95 (-) 1.74e5



PFDoA
Conc 0.0386
RT 5.221 Area 2845
Q 613.05>569.00 (-) 8.55e2



PFDoA-13C
Conc 0.6090
RT 5.252 Area 731255
Q 614.80>569.95 (-) 2.39e5



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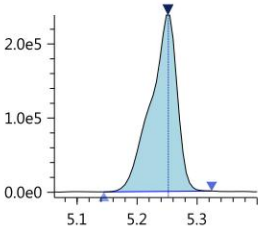
RT 5.252 Area 731255
ISTD 614.80>569.95 (-) 2.39e5



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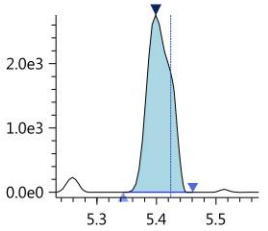
Conc 0.0918
RT 5.399 Area 7792
Q 663.00>618.90 (-) 2.76e3



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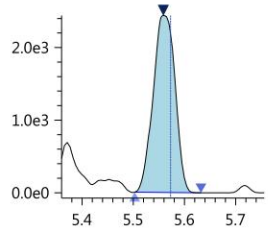
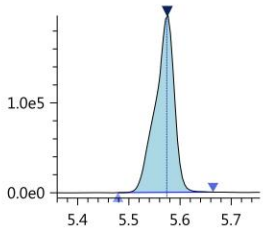
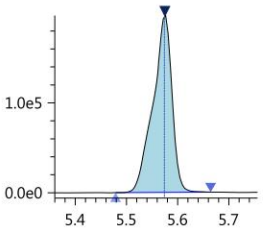
Conc 0.1172
RT 5.559 Area 7302
Q 713.40>669.00 (-) 2.44e3



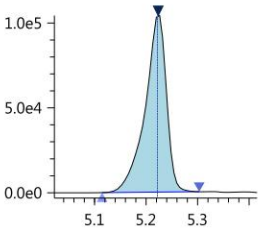
PFTeDA-13C
Conc 0.5368
RT 5.575 Area 507661
Q 714.70>669.90 (-) 1.97e5



PFTeDA-13C_IS
Conc 5.0000
RT 5.575 Area 507661
ISTD 714.70>669.90 (-) 1.97e5



FOSA-13C_IS
Conc 5.0000
RT 5.224 Area 299135
ISTD 506.00>78.05 (-) 1.04e5



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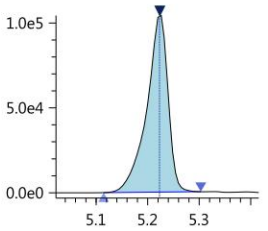
RT 5.224 Area 299135
Q 506.00>78.05 (-) 1.04e5



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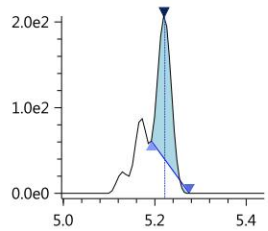
Conc 0.0039
RT 5.220 Area 316
Q 498.20>78.00 (-) 2.07e2



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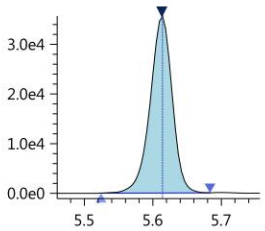
Conc 5.0000
RT 5.613 Area 80011
ISTD 514.90>168.90 (-) 3.57e4



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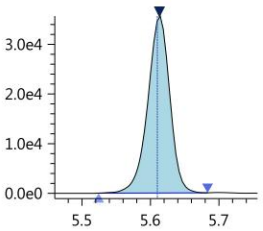
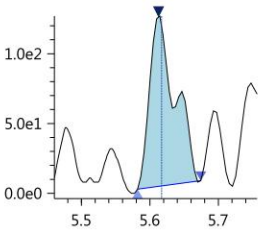
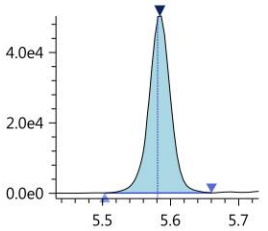
RT 5.613 Area 80011
Q 514.90>168.90 (-) 3.57e4



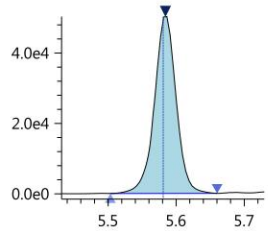
N-MeFOSA
Conc 0.0155
RT 5.613 Area 316
Q 512.00>169.10 (-) 1.27e2



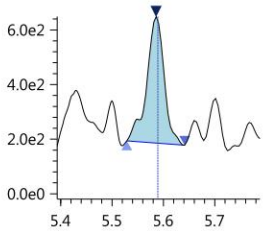
N-MeFOSE-d7
Conc 0.6969
RT 5.584 Area 111853
Q 622.70>59.10 (-) 5.04e4



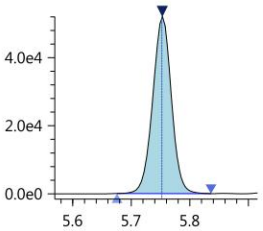
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.584 Area 111853
ISTD 622.70>59.10 (-) 5.04e4



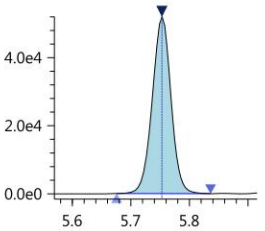
N-MeFOSE
Conc 0.0351
RT 5.586 Area 1082
Q 616.00>59.00 (-) 6.49e2



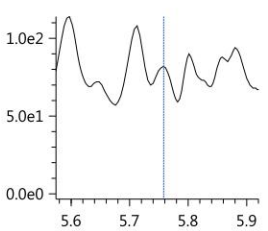
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.753 Area 115690
ISTD 530.90>169.15 (-) 5.21e4



N-EtFOSA-d9
Conc 0.5585
RT 5.753 Area 115690
Q 530.90>169.15 (-) 5.21e4



N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.14e2



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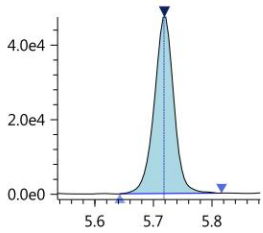
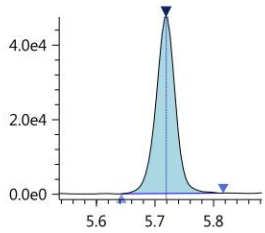
N-EtFOSE-d9_IS

Conc 5.0000
RT 5.719 Area 110764
ISTD 638.70>59.10 (-) 4.75e4



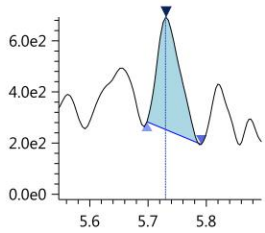
N-EtFOSE-d9

Conc 0.6260
RT 5.719 Area 110764
Q 638.70>59.10 (-) 4.75e4



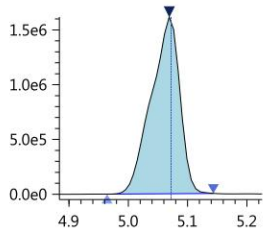
N-EtFOSE

Conc 0.0522
RT 5.731 Area 1188
Q 630.00>58.90 (-) 6.93e2



13C7-PFUnDA_IS

Conc 5.0000
RT 5.069 Area 5400040
ISTD 570.00>525.00 (-) 1.62e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_134
Lab ID: K1812302-004
RunType: N/A
Matrix: Water

Date Acquired: 1/5/19 13:40
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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	
Duplicate 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: _____

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Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_134	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 13:40	**Vial:**	16
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-004	**Raw Units:**	ng/mL

Bottle ID:	K1812302-004.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	K1812302
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.071	0.00	4064593	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.972	-0.01	630656	3.8771	78	20 - 109	Y
18O2-PFHxS	4.364	0.00	453280	4.0392	81	26 - 122	Y
13C4-PFOS	4.688	0.00	499146	4.2617	85	25 - 121	Y
13C4-PFBA	3.311	-0.01	2405891	4.6129	92	27 - 124	Y
13C5-PFPeA	3.917	-0.01	1489623	5.1253	103	27 - 138	Y
13C2-PFHxA	4.182	-0.01	4738777	4.8826	98	28 - 132	Y
13C4-PFHpA	4.366	0.00	3003571	4.1255	83	19 - 139	Y
13C4-PFOA	4.533	0.00	4041687	4.1647	83	22 - 130	Y
13C5-PFNA	4.701	-0.01	3597149	4.4547	89	20 - 127	Y
13C2-PFDA	4.887	0.00	3324070	4.7155	94	24 - 125	Y
13C2-PFUnDA	5.071	0.00	2536583	3.8458	77	22 - 125	Y
13C2-PFDoDA	5.250	0.00	3633215	3.7964	76	19 - 122	Y
13C2-PFTeDA	5.573	0.00	2780714	4.0607	81	13 - 124	Y
13C8-FOSA	5.227	0.00	590090	1.8935	38	18 - 109	Y
D3-MeFOSAA	4.993	0.00	486145	3.9416	79	9 - 123	Y
D5-EtFOSAA	5.090	0.00	493369	4.1666	83	12 - 126	Y
13C2-6:2 FTS	4.523	0.00	363261	3.5979	72	10 - 226	Y
13C2-8:2 FTS	4.884	-0.01	319955	4.0749	81	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)	3.971	-0.01	430	0.0033	0.087	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.370	+0.00	1919	0.0220	0.58	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

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1st CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_134	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 13:40	**Vial:**	16
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1812302-004	**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)	4.627	-0.06	222	0.0030	0.079	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.918	0.00	67995	0.0107	0.28	U	Y
Perfluorohexanoic acid (PFHxA)	4.180	-0.01	9967	0.0098	0.26	U	Y
Perfluoroheptanoic acid (PFHpA)	4.365	0.00	5280	0.0074	0.19	U	Y
Perfluorooctanoic acid (PFOA)	4.532	-0.01	16629	0.0244	0.64	J	Y
Perfluorononanoic acid (PFNA)	4.708	+0.00	1980	0.0071	0.19	U	Y
Perfluorodecanoic acid (PFDA)	4.886	-0.01	1335	0.0024	0.063	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.074	+0.00	3935	0.0093	0.24	U	Y
Perfluorododecanoic acid (PFDoDA)	5.237	-0.01	346	0.0105	0.28	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.415	-0.01	2389	0.0027	0.071	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.572	0.00	18567	-0.0025	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.225	0.00	12776	0.0810	2.1	J	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0		0	0	0	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.879	-0.01	50	0.0009	0.024	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 1/18/2019 10:42:01 AM

010419_134

Sample ID: K1812302-004
Date acquired: 1/5/2019 1:40:17 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_134.lcd
Vial: 36 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.311	2412625	2412625	2	5.0000	ng/mL	----
PFBA-13C	M	3.311	2405891	4064593	26	4.6129	ng/mL	----
PFBA	ND(W/B)	----	----	2412625	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.917	1489623	1489623	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.917	1489623	4064593	26	5.1253	ng/mL	----
PFPeA	Auto	3.918	67995	1489623	4	0.0107	ng/mL	----
PFBS_1	M	3.971	430	630656	16	0.0033	ng/mL	----
PFBS-13C	Auto	3.972	630656	4064593	26	3.8771	ng/mL	----
PFBS-13C_IS	Auto	3.972	630656	630656	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.182	4738777	4738777	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.182	4738777	4064593	26	4.8826	ng/mL	----
PFHxA	M	4.180	9967	4738777	6	0.0098	ng/mL	----
PFHpA	M	4.365	5280	3003571	8	0.0074	ng/mL	----
PFHpA-13C_IS	Auto	4.366	3003571	3003571	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.366	3003571	4064593	26	4.1255	ng/mL	----
PFHxS-18O_IS	Auto	4.364	453280	453280	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.364	453280	4064593	26	4.0392	ng/mL	----
PFHxS_1	Auto	4.370	1919	453280	7	0.0220	ng/mL	----
6_2-FTS-13C	Auto	4.523	363261	4064593	26	3.5979	ng/mL	----
6_2-FTS-13C_IS	Auto	4.523	363261	363261	10	5.0000	ng/mL	----
6_2-FTS_1	ND(W/B)	----	----	363261	10	----	ng/mL	----
PFHpS_1	ND(W/B)	----	----	453280	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.533	4041687	4041687	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.533	4041687	4064593	26	4.1647	ng/mL	----
PFOA	Auto	4.532	16629	4041687	9	0.0244	ng/mL	----
PFOS_1	M	4.627	222	499146	13	0.0030	ng/mL	----
PFOS-13C_IS	Auto	4.688	499146	499146	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.688	499146	4064593	26	4.2617	ng/mL	----
PFNA-13C_IS	Auto	4.701	3597149	3597149	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.701	3597149	4064593	26	4.4547	ng/mL	----
PFNA	Auto	4.708	1980	3597149	11	0.0071	ng/mL	----
PFDA-13C_IS	Auto	4.887	3324070	3324070	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.887	3324070	4064593	26	4.7155	ng/mL	----
PFDA	Auto	4.886	1335	3324070	12	0.0024	ng/mL	----
8_2-FTS-13C_IS	Auto	4.884	319955	319955	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.884	319955	4064593	26	4.0749	ng/mL	----
8_2-FTS_1	M	4.879	50	319955	15	0.0009	ng/mL	----
PFDS_1	ND(W/B)	----	----	499146	13	----	ng/mL	----
PFUnA	Auto	5.074	3935	2536583	14	0.0093	ng/mL	----
PFUnA-13C_IS	Auto	5.071	2536583	2536583	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.071	2536583	4064593	26	3.8458	ng/mL	----
PFDoA	Auto	5.237	346	3633215	17	0.0105	ng/mL	----
PFDoA-13C	Auto	5.250	3633215	4064593	26	3.7964	ng/mL	----
PFDoA-13C_IS	Auto	5.250	3633215	3633215	17	5.0000	ng/mL	----
PFTrDA	Auto	5.415	2389	2780714	22	0.0027	ng/mL	----
PFTeDA	Auto	5.572	18567	2780714	22	-0.0025	ng/mL	----
PFTeDA-13C	Auto	5.573	2780714	4064593	26	4.0607	ng/mL	----
PFTeDA-13C_IS	Auto	5.573	2780714	2780714	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.227	590090	590090	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.227	590090	4064593	26	1.8935	ng/mL	----
FOSA	Auto	5.225	12776	590090	18	0.0810	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	486145	19	----	ng/mL	----
N-MeFOSAA-d3	Auto	4.993	486145	4064593	26	3.9416	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.993	486145	486145	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.618	150962	150962	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.618	150962	4064593	26	1.7023	ng/mL	----
N-MeFOSA	Auto	5.624	552	150962	1	0.0138	ng/mL	----
N-MeFOSE-d7	Auto	5.590	543950	4064593	26	4.2225	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.590	543950	543950	20	5.0000	ng/mL	----
N-MeFOSE	M	5.601	305	543950	20	0.0019	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	493369	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.090	493369	493369	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.090	493369	4064593	26	4.1666	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.756	258702	258702	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.756	258702	4064593	26	1.7398	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	258702	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.722	569213	569213	24	5.0000	ng/mL	----

Insight Report

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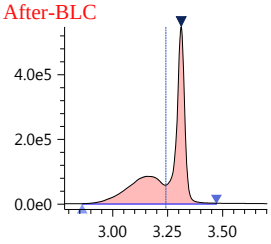
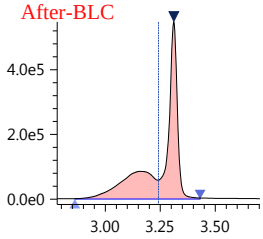
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.722	569213	4064593	26	4.0942	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	569213	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.071	4064593	4064593	26	5.0000	ng/mL	----

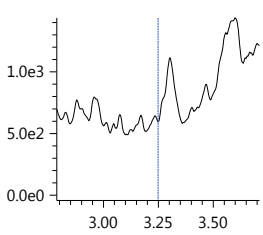
PFBA-13C_IS
Conc 5.0000
RT 3.311 Area 2412625
ISTD 216.90>172.15 (-) 5.48e5
After-BLC



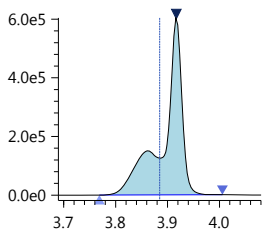
PFBA-13C
Conc 4.6129
RT 3.311 Area 2405891
Q 216.90>172.15 (-) 5.48e5
After-BLC



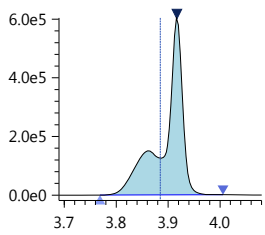
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.44e3



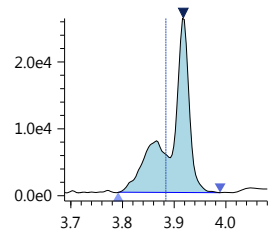
PFPeA-13C_IS
Conc 5.0000
RT 3.917 Area 1489623
ISTD 267.90>223.00 (-) 6.04e5



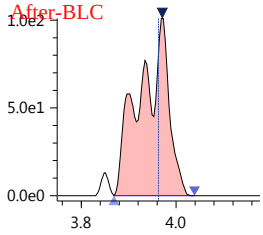
PFPeA-13C
Conc 5.1253
RT 3.917 Area 1489623
Q 267.90>223.00 (-) 6.04e5



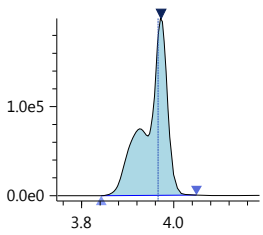
PFPeA
Conc 0.0107
RT 3.918 Area 67995
Q 263.05>219.10 (-) 2.65e4



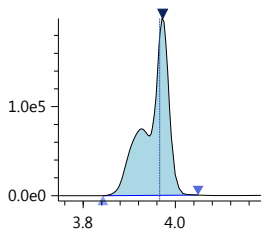
PFBS_1
Conc 0.0033
RT 3.971 Area 430
Q 299.00>80.00 (-) 1.01e2
After-BLC



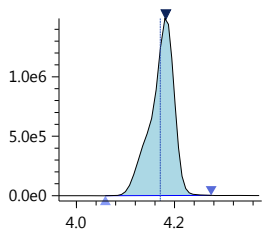
PFBS-13C
Conc 3.8771
RT 3.972 Area 630656
Q 301.80>80.00 (-) 1.99e5



PFBS-13C_IS
Conc 5.0000
RT 3.972 Area 630656
ISTD 301.80>80.00 (-) 1.99e5



PFHxA-13C_IS
Conc 5.0000
RT 4.182 Area 4738777
ISTD 314.90>270.10 (-) 1.49e6



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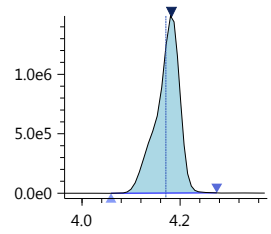
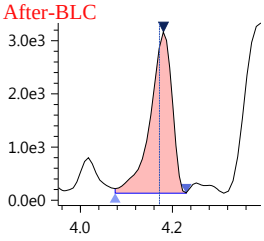
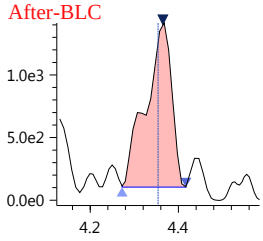
Conc 4.8826
RT 4.182 Area 4738777
Q 314.90>270.10 (-) 1.49e6



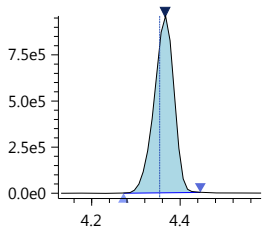
PFHxA
Conc 0.0098
RT 4.180 Area 9967
Q 313.00>269.00 (-) 3.33e3
After-BLC



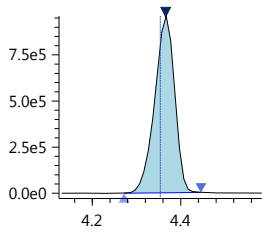
PFHpA
Conc 0.0074
RT 4.365 Area 5280
Q 362.90>319.00 (-) 1.42e3
After-BLC



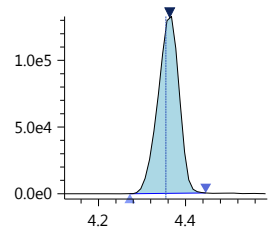
PFHpA-13C_IS
Conc 5.0000
RT 4.366 Area 3003571
ISTD 366.90>322.10 (-) 9.61e5



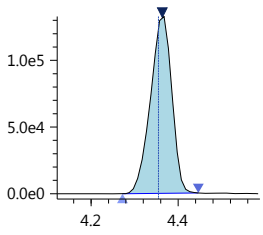
PFHpA-13C
Conc 4.1255
RT 4.366 Area 3003571
Q 366.90>322.10 (-) 9.61e5



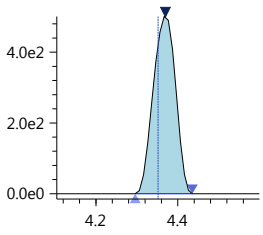
PFHxS-18O_IS
Conc 5.0000
RT 4.364 Area 453280
ISTD 402.70>84.05 (-) 1.33e5



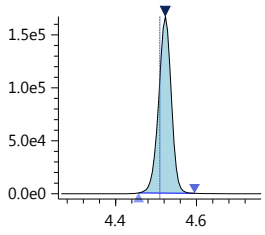
PFHxS-18O
Conc 4.0392
RT 4.364 Area 453280
Q 402.70>84.05 (-) 1.33e5



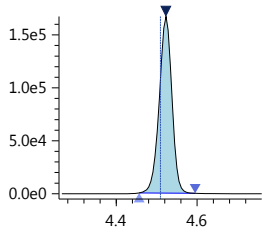
PFHxS_1
Conc 0.0220
RT 4.370 Area 1919
Q 399.00>80.00 (-) 5.01e2



6_2-FTS-13C
Conc 3.5979
RT 4.523 Area 363261
Q 428.90>409.00 (-) 1.67e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.523 Area 363261
ISTD 428.90>409.00 (-) 1.67e5



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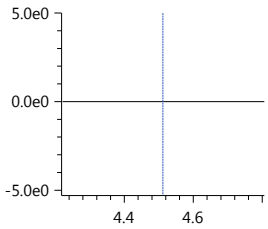
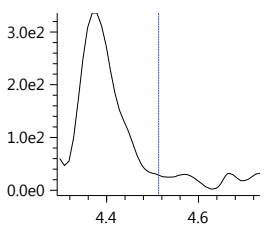
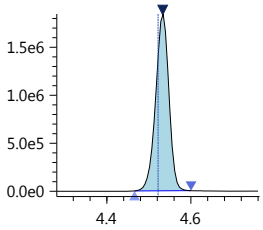
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 0.00e0



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.36e2



PFOA-13C_IS
Conc 5.0000
RT 4.533 Area 4041687
ISTD 416.80>372.05 (-) 1.85e6



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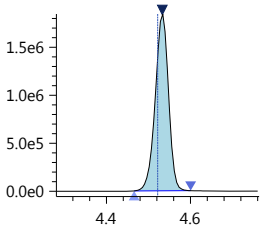
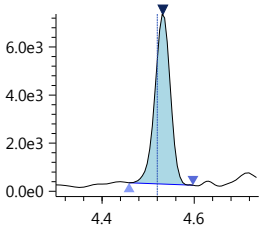
Conc 4.1647
RT 4.533 Area 4041687
Q 416.80>372.05 (-) 1.85e6

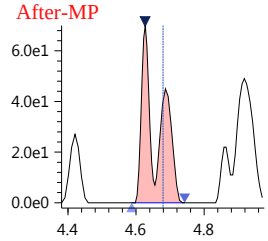


PFOA
Conc 0.0244
RT 4.532 Area 16629
Q 413.00>369.00 (-) 7.37e3

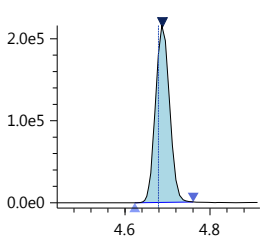


PFOS_1
Conc 0.0030
RT 4.627 Area 222
Q 499.00>80.00 (-) 7.00e1

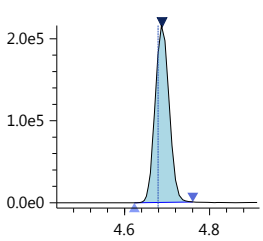
After-MP



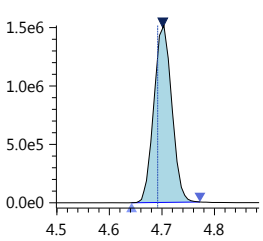
PFOS-13C_IS
Conc 5.0000
RT 4.688 Area 499146
ISTD 502.80>80.05 (-) 2.16e5



PFOS-13C
Conc 4.2617
RT 4.688 Area 499146
Q 502.80>80.05 (-) 2.16e5



PFNA-13C_IS
Conc 5.0000
RT 4.701 Area 3597149
ISTD 467.80>423.00 (-) 1.52e6



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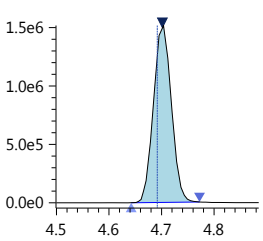
Conc 4.4547
RT 4.701 Area 3597149
Q 467.80>423.00 (-) 1.52e6



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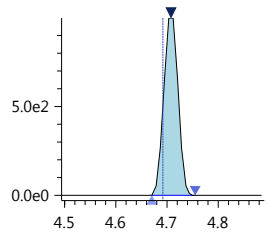
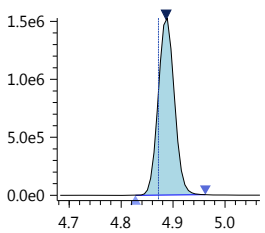
Conc 0.0071
RT 4.708 Area 1980
Q 463.00>418.90 (-) 9.98e2



PFDA-13C_IS
Conc 5.0000
RT 4.887 Area 3324070
ISTD 514.80>469.95 (-) 1.53e6



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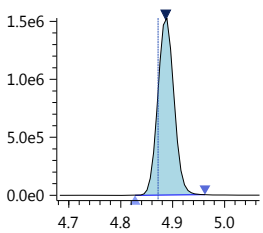
Conc 4.7155
RT 4.887 Area 3324070
Q 514.80>469.95 (-) 1.53e6



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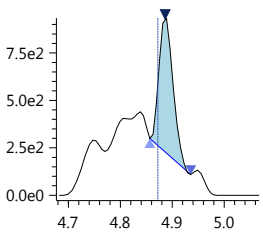
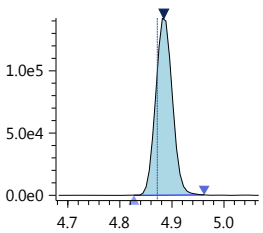
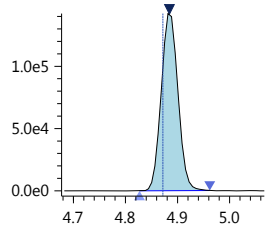
Conc 0.0024
RT 4.886 Area 1335
Q 513.00>468.80 (-) 9.34e2



8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 319955
ISTD 528.80>509.00 (-) 1.42e5

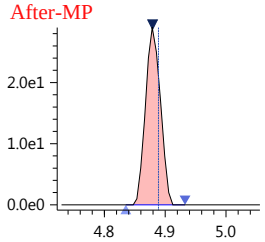


8_2-FTS-13C
Conc 4.0749
RT 4.884 Area 319955
Q 528.80>509.00 (-) 1.42e5

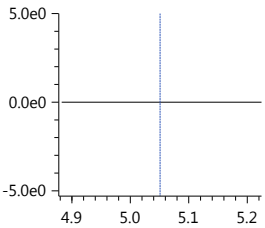


8_2-FTS_1
Conc 0.0009
RT 4.879 Area 50
Q 527.10>506.90 (-) 2.90e1

After-MP



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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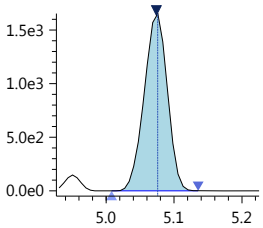
Conc 0.0093
RT 5.074 Area 3935
Q 563.00>518.90 (-) 1.65e3



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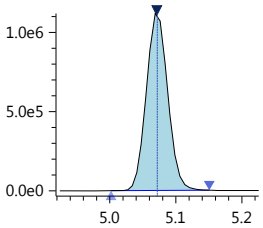
Conc 5.0000
RT 5.071 Area 2536583
ISTD 564.80>519.95 (-) 1.12e6



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PFUnA-13C
Conc 3.8458
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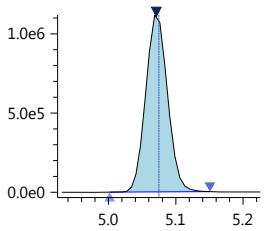
Q 564.80>519.95 (-) 1.12e6



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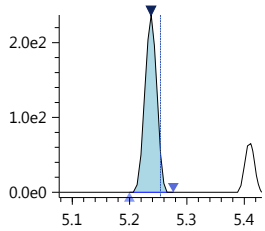
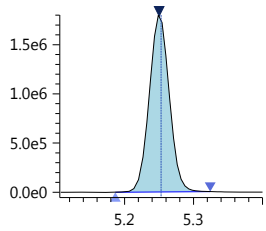
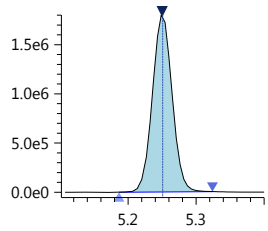
Conc 0.0105
RT 5.237 Area 346
Q 613.05>569.00 (-) 2.37e2



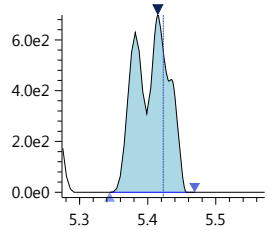
PFDoA-13C
Conc 3.7964
RT 5.250 Area 3633215
Q 614.80>569.95 (-) 1.80e6



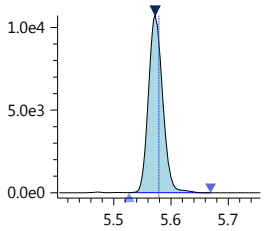
PFDoA-13C_IS
Conc 5.0000
RT 5.250 Area 3633215
ISTD 614.80>569.95 (-) 1.80e6



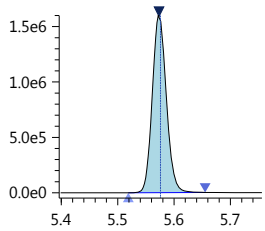
PFTrDA
Conc 0.0027
RT 5.415 Area 2389
Q 663.00>618.90 (-) 6.98e2



PFTeDA
Conc -0.0025
RT 5.572 Area 18567
Q 713.40>669.00 (-) 1.07e4



PFTeDA-13C
Conc 4.0607
RT 5.573 Area 2780714
Q 714.70>669.90 (-) 1.60e6



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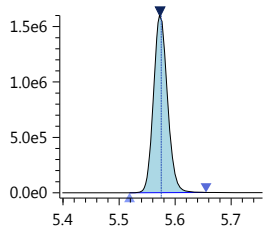
ISTD 714.70>669.90 (-) 1.60e6



FOSA-13C_IS
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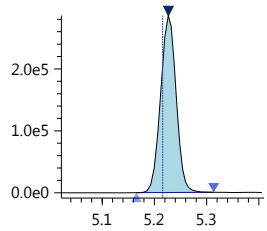
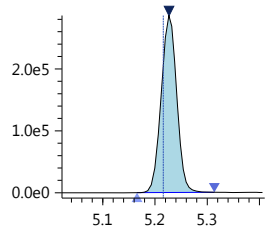
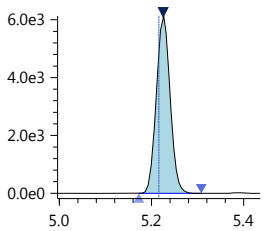
RT 5.227 Area 590090
ISTD 506.00>78.05 (-) 2.86e5



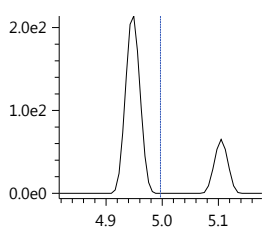
FOSA-13C
Conc 1.8935
RT 5.227 Area 590090
Q 506.00>78.05 (-) 2.86e5



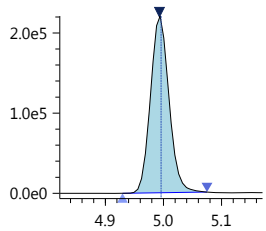
FOSA
Conc 0.0810
RT 5.225 Area 12776
Q 498.20>78.00 (-) 6.13e3



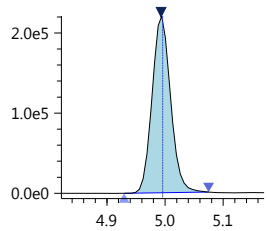
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 2.14e2



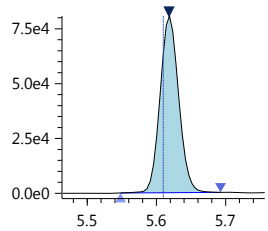
N-MeFOSAA-d3
Conc 3.9416
RT 4.993 Area 486145
Q 572.80>419.05 (-) 2.21e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.993 Area 486145
ISTD 572.80>419.05 (-) 2.21e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.618 Area 150962
ISTD 514.90>168.90 (-) 8.08e4



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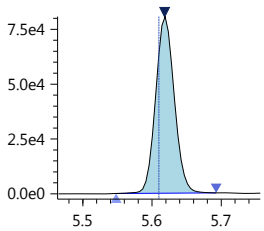
RT 5.618 Area 150962
Q 514.90>168.90 (-) 8.08e4



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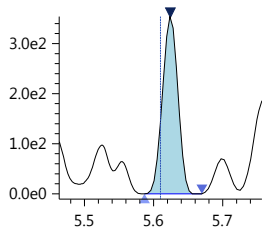
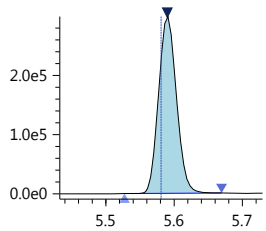
Conc 0.0138
RT 5.624 Area 552
Q 512.00>169.10 (-) 3.54e2



N-MeFOSE-d7
Conc 4.2225
RT 5.590 Area 543950
Q 622.70>59.10 (-) 2.99e5



N-MeFOSE-d7_IS
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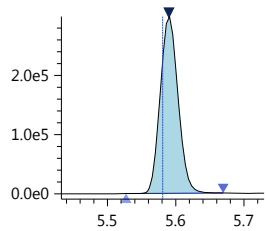

N-MeFOSE
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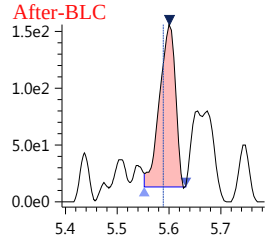
RT 5.601 Area 305
Q 616.00>59.00 (-) 1.56e2



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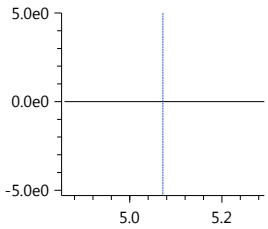
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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Conc 5.0000
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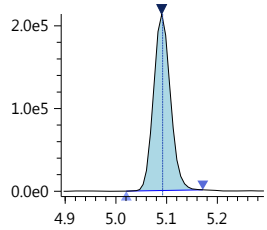
ISTD 588.80>419.00 (-) 2.14e5



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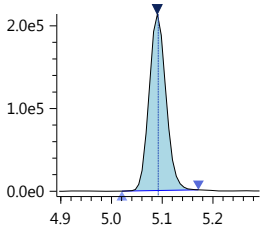
Conc 4.1666
RT 5.090 Area 493369
Q 588.80>419.00 (-) 2.14e5



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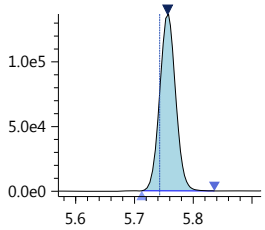
Conc 5.0000
RT 5.756 Area 258702
ISTD 530.90>169.15 (-) 1.37e5



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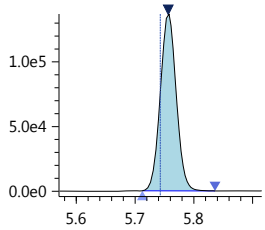
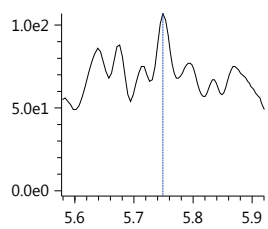
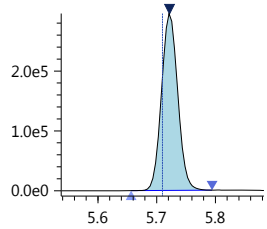
Q 530.90>169.15 (-) 1.37e5



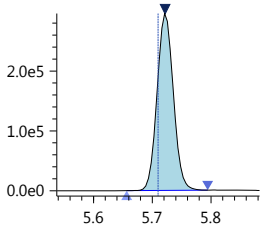
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.07e2



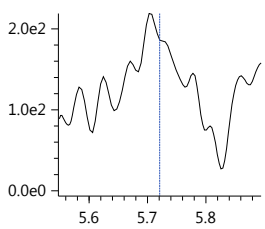
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.722 Area 569213
ISTD 638.70>59.10 (-) 2.96e5



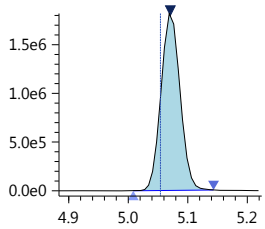
N-EtFOSE-d9
Conc 4.0942
RT 5.722 Area 569213
Q 638.70>59.10 (-) 2.96e5



N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 2.19e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.071 Area 4064593
ISTD 570.00>525.00 (-) 1.82e6



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Printed at 1/18/2019 8:51:07 AM

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Acquired by: System Administrator
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PFBA-13C_IS
Conc 5.0000
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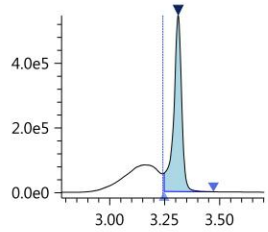
ISTD 216.90>172.15 (-) 5.48e5



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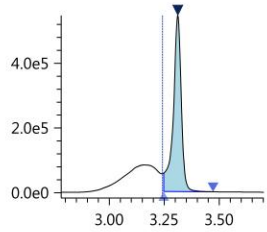

PFBA
Conc ----
RT ---- Area ----
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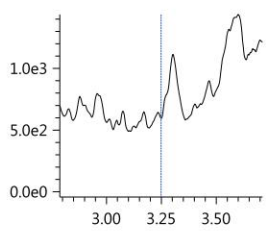
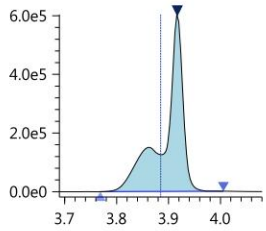


PFPeA-13C_IS
Conc 5.0000
RT 3.917 Area 1489623
ISTD 267.90>223.00 (-) 6.04e5



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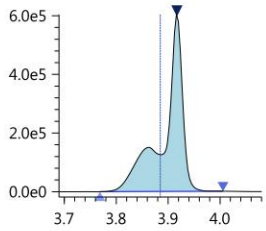
RT 3.917 Area 1489623
Q 267.90>223.00 (-) 6.04e5



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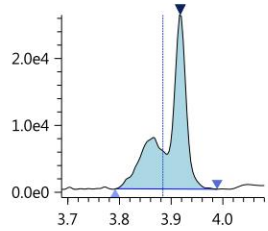
Conc 0.0107
RT 3.918 Area 67995
Q 263.05>219.10 (-) 2.65e4



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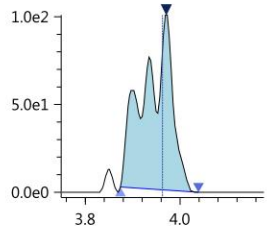
Q 299.00>80.00 (-) 1.01e2



PFBS-13C
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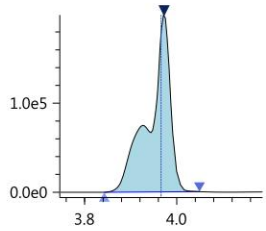
RT 3.972 Area 630656
Q 301.80>80.00 (-) 1.99e5



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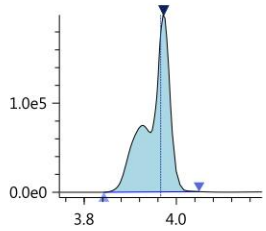

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Conc 5.0000
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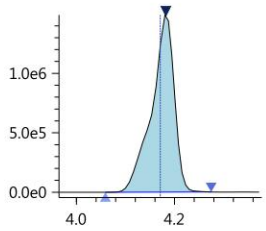
ISTD 314.90>270.10 (-) 1.49e6



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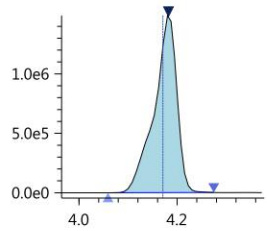

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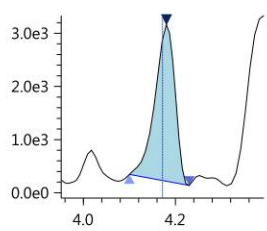
Q 313.00>269.00 (-) 3.33e3



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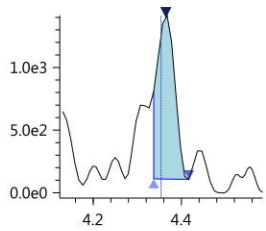
Conc 0.0048
RT 4.365 Area 3577
Q 362.90>319.00 (-) 1.42e3



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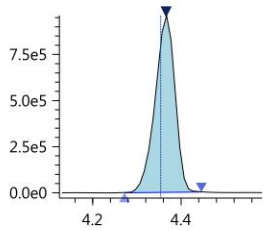
Conc 5.0000
RT 4.366 Area 3003571
ISTD 366.90>322.10 (-) 9.61e5



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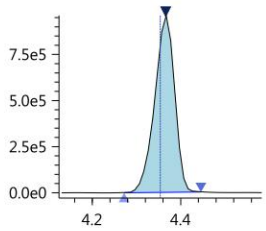
Q 366.90>322.10 (-) 9.61e5



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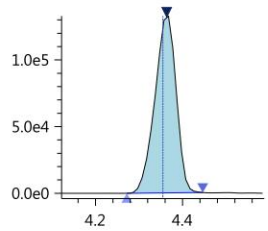
RT 4.364 Area 453280
ISTD 402.70>84.05 (-) 1.33e5



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Conc 4.0392
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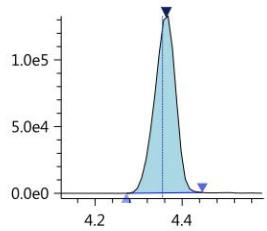

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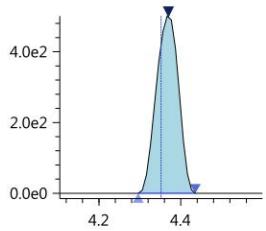
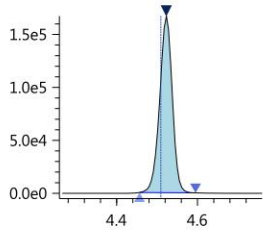
Conc 0.0220
RT 4.370 Area 1919
Q 399.00>80.00 (-) 5.01e2



6_2-FTS-13C
Conc 3.5979
RT 4.523 Area 363261
Q 428.90>409.00 (-) 1.67e5



6_2-FTS-13C_IS
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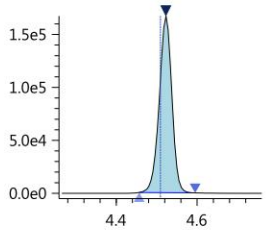

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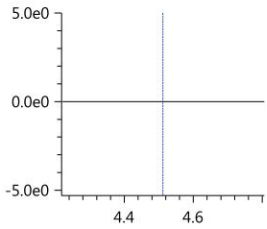
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 0.00e0



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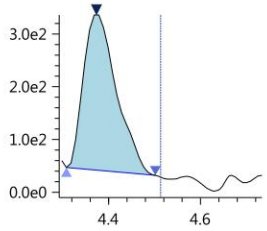

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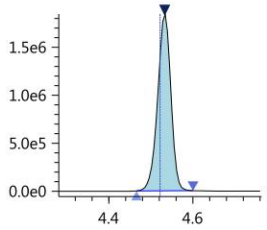
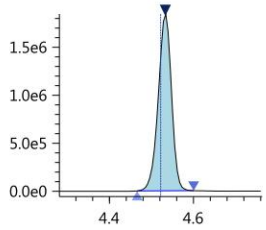
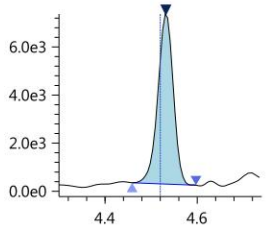
ISTD 416.80>372.05 (-) 1.85e6



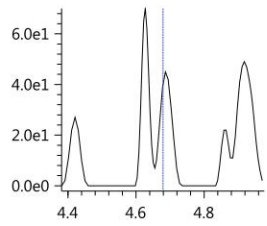
PFOA-13C
Conc 4.1647
RT 4.533 Area 4041687
Q 416.80>372.05 (-) 1.85e6



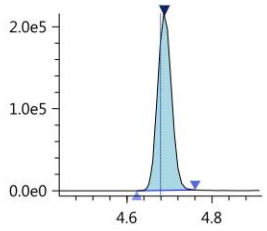
PFOA
Conc 0.0244
RT 4.532 Area 16629
Q 413.00>369.00 (-) 7.37e3



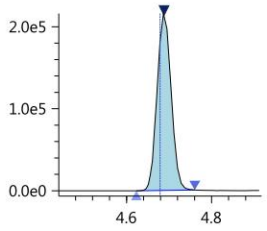
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 7.00e1



PFOS-13C_IS
Conc 5.0000
RT 4.688 Area 499146
ISTD 502.80>80.05 (-) 2.16e5



PFOS-13C
Conc 4.2617
RT 4.688 Area 499146
Q 502.80>80.05 (-) 2.16e5



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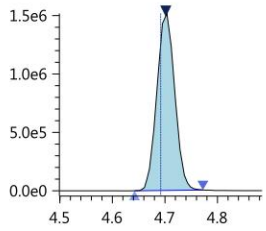
Conc 5.0000
RT 4.701 Area 3597149
ISTD 467.80>423.00 (-) 1.52e6



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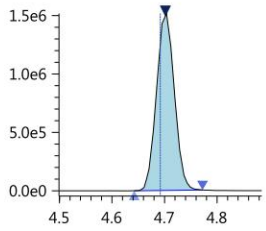
Conc 4.4547
RT 4.701 Area 3597149
Q 467.80>423.00 (-) 1.52e6



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Conc 0.0071
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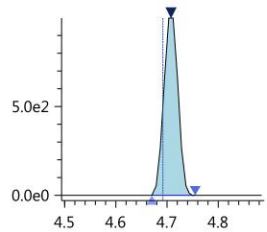
Q 463.00>418.90 (-) 9.98e2



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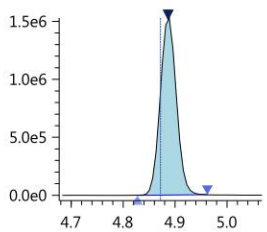
Conc 5.0000
RT 4.887 Area 3324070
ISTD 514.80>469.95 (-) 1.53e6



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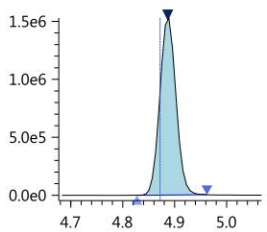
Q 514.80>469.95 (-) 1.53e6



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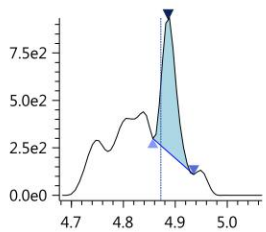
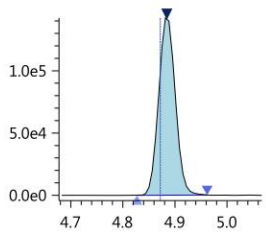
Conc 0.0024
RT 4.886 Area 1335
Q 513.00>468.80 (-) 9.34e2



8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 319955
ISTD 528.80>509.00 (-) 1.42e5



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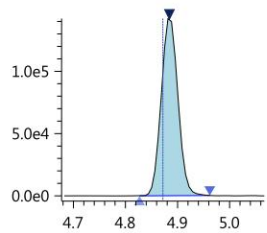
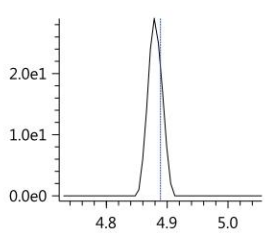
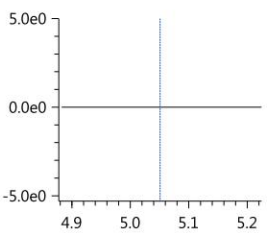
RT 4.884 Area 319955
Q 528.80>509.00 (-) 1.42e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.90e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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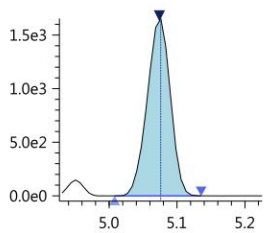
RT 5.074 Area 3935
Q 563.00>518.90 (-) 1.65e3



PFUnA-13C_IS
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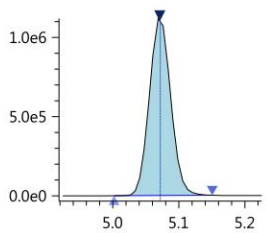
RT 5.071 Area 2536583
ISTD 564.80>519.95 (-) 1.12e6



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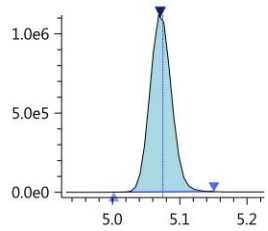
PFUnA-13C
Conc 3.8458
RT 5.071 Area 2536583
Q 564.80>519.95 (-) 1.12e6



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Conc 0.0105
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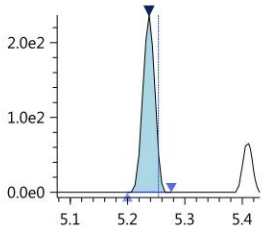
Q 613.05>569.00 (-) 2.37e2



PFDoA-13C
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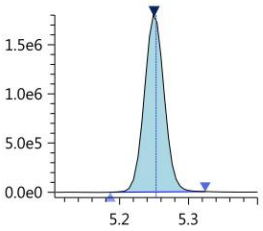
RT 5.250 Area 3633215
Q 614.80>569.95 (-) 1.80e6



PFDoA-13C_IS
Conc 5.0000
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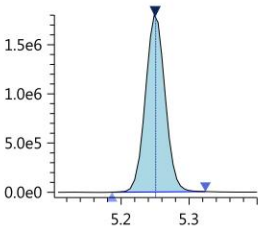
ISTD 614.80>569.95 (-) 1.80e6



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RT 5.415 Area 2389
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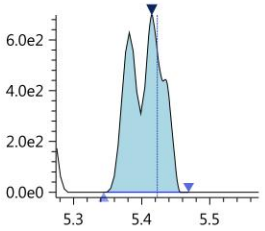

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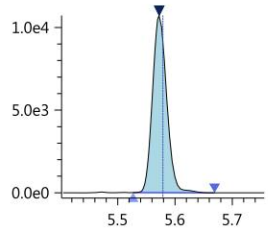
Conc -0.0025
RT 5.572 Area 18567
Q 713.40>669.00 (-) 1.07e4



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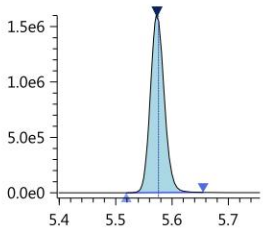
Conc 4.0607
RT 5.573 Area 2780714
Q 714.70>669.90 (-) 1.60e6



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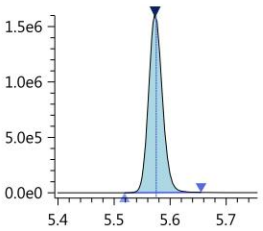
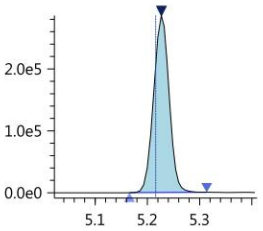
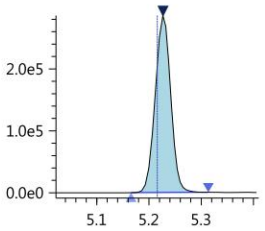
ISTD 714.70>669.90 (-) 1.60e6



FOSA-13C_IS
Conc 5.0000
RT 5.227 Area 590090
ISTD 506.00>78.05 (-) 2.86e5



FOSA-13C
Conc 1.8935
RT 5.227 Area 590090
Q 506.00>78.05 (-) 2.86e5



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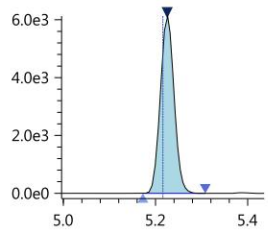
Conc 0.0810
RT 5.225 Area 12776
Q 498.20>78.00 (-) 6.13e3



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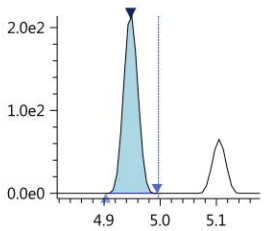
Conc 0.0077
RT 4.947 Area 394
Q 570.20>419.00 (-) 2.14e2



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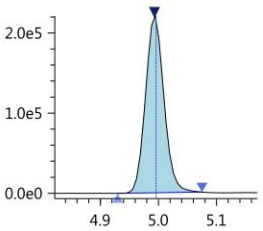
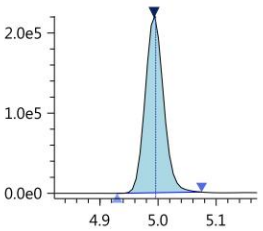
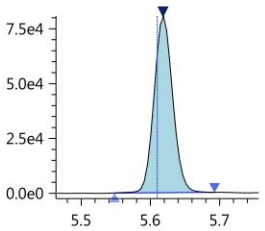
Conc 3.9416
RT 4.993 Area 486145
Q 572.80>419.05 (-) 2.21e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.993 Area 486145
ISTD 572.80>419.05 (-) 2.21e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.618 Area 150962
ISTD 514.90>168.90 (-) 8.08e4



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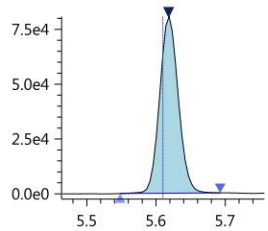
Conc 1.7023
RT 5.618 Area 150962
Q 514.90>168.90 (-) 8.08e4



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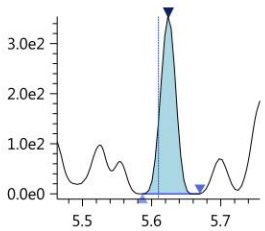
Conc 0.0138
RT 5.624 Area 552
Q 512.00>169.10 (-) 3.54e2



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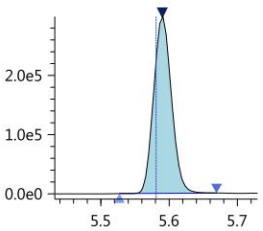
Conc 4.2225
RT 5.590 Area 543950
Q 622.70>59.10 (-) 2.99e5



N-MeFOSE-d7_IS
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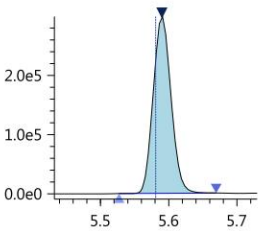
ISTD 622.70>59.10 (-) 2.99e5



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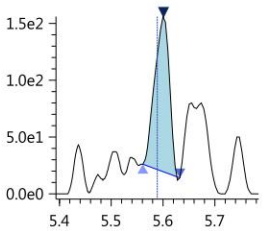
Conc 0.0017
RT 5.601 Area 268
Q 616.00>59.00 (-) 1.56e2



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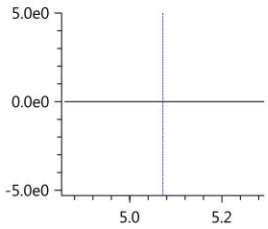
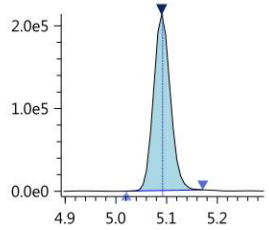
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.090 Area 493369
ISTD 588.80>419.00 (-) 2.14e5



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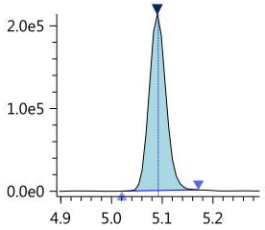
Conc 4.1666
RT 5.090 Area 493369
Q 588.80>419.00 (-) 2.14e5



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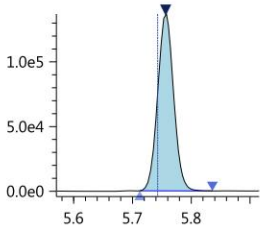
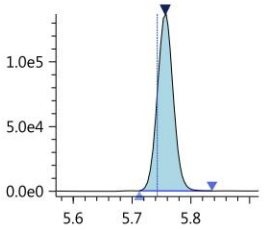
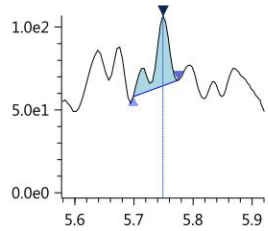
Conc 5.0000
RT 5.756 Area 258702
ISTD 530.90>169.15 (-) 1.37e5



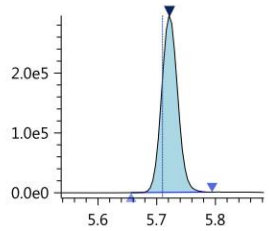
N-EtFOSA-d9
Conc 1.7398
RT 5.756 Area 258702
Q 530.90>169.15 (-) 1.37e5



N-EtFOSA
Conc 0.0079
RT 5.749 Area 73
Q 526.90>169.10 (-) 1.07e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.722 Area 569213
ISTD 638.70>59.10 (-) 2.96e5



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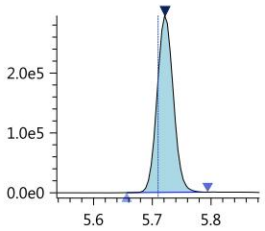
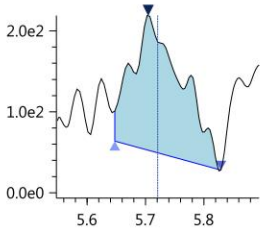
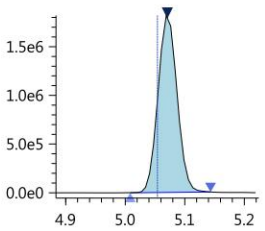
RT 5.722 Area 569213
Q 638.70>59.10 (-) 2.96e5



N-EtFOSE
Conc 0.0073
RT 5.705 Area 1010
Q 630.00>58.90 (-) 2.19e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.071 Area 4064593
ISTD 570.00>525.00 (-) 1.82e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_128
Lab ID: R1812115-005
RunType: N/A
Matrix: Water

Date Acquired: 1/5/19 12:37
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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	
Duplicate 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: _____

Printed: 1/18/19 10:55
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Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_128	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 12:37	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1812115-005	**Raw Units:**	ng/mL

Bottle ID:	R1812115-005.01	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/13/18	**Receive Date:**	12/13/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	R1812115
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.073		4711087	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.977	0.00	738432	3.9167	78	20 - 109	Y
18O2-PFHxS	4.369	+0.00	637846	4.9039	98	26 - 122	Y
13C4-PFOS	4.692		562563	4.1440	83	25 - 121	Y
13C4-PFBA	3.315	-0.01	2621793	4.3370	87	27 - 124	Y
13C5-PFPeA	3.921	0.00	1536908	4.5623	91	27 - 138	Y
13C2-PFHxA	4.188		5528326	4.9145	98	28 - 132	Y
13C4-PFHpA	4.370	+0.00	3749829	4.4437	89	19 - 139	Y
13C4-PFOA	4.537		4558863	4.0530	81	22 - 130	Y
13C5-PFNA	4.706		4059591	4.3375	87	20 - 127	Y
13C2-PFDA	4.891		3248598	3.9761	80	24 - 125	Y
13C2-PFUnDA	5.074	+0.00	2869456	3.7535	75	22 - 125	Y
13C2-PFDoDA	5.253		3792267	3.4188	68	19 - 122	Y
13C2-PFTeDA	5.576		2527821	3.1848	64	13 - 124	Y
13C8-FOSA	5.230	+0.00	1286960	3.5630	71	18 - 109	Y
D3-MeFOSAA	4.997	+0.00	462045	3.2321	65	9 - 123	Y
D5-EtFOSAA	5.094	+0.00	477955	3.4825	70	12 - 126	Y
13C2-6:2 FTS	4.527		425439	3.6355	73	10 - 226	Y
13C2-8:2 FTS	4.888	0.00	283547	3.1157	62	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)	3.978	+0.00	19938	0.1325	3.5	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.363	0.00	25284	0.2057	5.4		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

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1st CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_128	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 12:37	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	R1812115-005	**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)	4.691		14495	0.1747	4.6		Y
Perfluorodecane sulfonic acid (PFDS)	5.054	+0.00	164	0.0016	0.042	U	Y
Perfluorobutanoic acid (PFBA)	3.316	-0.01	493356	1.0342	27		Y
Perfluoropentanoic acid (PFPeA)	3.921	0.00	404375	0.4562	12		Y
Perfluorohexanoic acid (PFHxA)	4.188	+0.00	771162	0.7892	21		Y
Perfluoroheptanoic acid (PFHpA)	4.368		214006	0.2665	7.0		Y
Perfluorooctanoic acid (PFOA)	4.536	0.00	464565	0.6209	16		Y
Perfluorononanoic acid (PFNA)	4.713	+0.01	5024	0.0123	0.32	U	Y
Perfluorodecanoic acid (PFDA)	4.891		3430	0.0063	0.17	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.073		5424	0.0114	0.30	U	Y
Perfluorododecanoic acid (PFDoDA)	5.262	+0.01	1981	0.0144	0.38	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.430	+0.01	1737	0.0018	0.047	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.575	0.00	21341	0.0262	0.69	U	Y
Perfluorooctane sulfonamide (FOSA)	5.232	+0.00	1816	0.0053	0.14	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.994	0.00	380	0.0078	0.20	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.101	+0.00	781	0.0466	1.2	J	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.524	0.00	326	0.0042	0.11	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.891	+0.00	123	0.0025	0.066	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

Insight Report

Printed at 1/18/2019 10:42:01 AM

010419_128

Sample ID: R1812115-005
Date acquired: 1/5/2019 12:37:36 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_128.lcd
Vial: 30 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.315	2704459	2704459	2	5.0000	ng/mL	----
PFBA-13C	M	3.315	2621793	4711087	26	4.3370	ng/mL	----
PFBA	M	3.316	493356	2704459	2	1.0342	ng/mL	----
PFPeA-13C_IS	Auto	3.921	1536908	1536908	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.921	1536908	4711087	26	4.5623	ng/mL	----
PFPeA	M	3.921	404375	1536908	4	0.4562	ng/mL	----
PFBS_1	Auto	3.978	19938	738432	16	0.1325	ng/mL	----
PFBS-13C	Auto	3.977	738432	4711087	26	3.9167	ng/mL	----
PFBS-13C_IS	Auto	3.977	738432	738432	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.188	5528326	5528326	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.188	5528326	4711087	26	4.9145	ng/mL	----
PFHxA	Auto	4.188	771162	5528326	6	0.7892	ng/mL	----
PFHpA	Auto	4.368	214006	3749829	8	0.2665	ng/mL	----
PFHpA-13C_IS	Auto	4.370	3749829	3749829	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.370	3749829	4711087	26	4.4437	ng/mL	----
PFHxS-18O_IS	Auto	4.369	637846	637846	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.369	637846	4711087	26	4.9039	ng/mL	----
PFHxS_1	Auto	4.363	25284	637846	7	0.2057	ng/mL	----
6_2-FTS-13C	Auto	4.527	425439	4711087	26	3.6355	ng/mL	----
6_2-FTS-13C_IS	Auto	4.527	425439	425439	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.524	326	425439	10	0.0042	ng/mL	----
PFHpS_1	ND(W/B)	----	----	637846	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.537	4558863	4558863	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.537	4558863	4711087	26	4.0530	ng/mL	----
PFOA	Auto	4.536	464565	4558863	9	0.6209	ng/mL	----
PFOS_1	Auto	4.691	14495	562563	13	0.1747	ng/mL	----
PFOS-13C_IS	Auto	4.692	562563	562563	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.692	562563	4711087	26	4.1440	ng/mL	----
PFNA-13C_IS	Auto	4.706	4059591	4059591	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.706	4059591	4711087	26	4.3375	ng/mL	----
PFNA	M	4.713	5024	4059591	11	0.0123	ng/mL	----
PFDA-13C_IS	Auto	4.891	3248598	3248598	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.891	3248598	4711087	26	3.9761	ng/mL	----
PFDA	M	4.891	3430	3248598	12	0.0063	ng/mL	----
8_2-FTS-13C_IS	Auto	4.888	283547	283547	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.888	283547	4711087	26	3.1157	ng/mL	----
8_2-FTS_1	Auto	4.891	123	283547	15	0.0025	ng/mL	----
PFDS_1	Auto	5.054	164	562563	13	0.0016	ng/mL	----
PFUnA	Auto	5.073	5424	2869456	14	0.0114	ng/mL	----
PFUnA-13C_IS	Auto	5.074	2869456	2869456	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.074	2869456	4711087	26	3.7535	ng/mL	----
PFDoA	M	5.262	1981	3792267	17	0.0144	ng/mL	----
PFDoA-13C	Auto	5.253	3792267	4711087	26	3.4188	ng/mL	----
PFDoA-13C_IS	Auto	5.253	3792267	3792267	17	5.0000	ng/mL	----
PFTrDA	Auto	5.430	1737	2527821	22	0.0018	ng/mL	----
PFTeDA	Auto	5.575	21341	2527821	22	0.0262	ng/mL	----
PFTeDA-13C	Auto	5.576	2527821	4711087	26	3.1848	ng/mL	----
PFTeDA-13C_IS	Auto	5.576	2527821	2527821	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.230	1286960	1286960	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.230	1286960	4711087	26	3.5630	ng/mL	----
FOSA	M	5.232	1816	1286960	18	0.0053	ng/mL	----
N-MeFOSAA	M	4.994	380	462045	19	0.0078	ng/mL	----
N-MeFOSAA-d3	Auto	4.997	462045	4711087	26	3.2321	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.997	462045	462045	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.622	381694	381694	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.622	381694	4711087	26	3.7135	ng/mL	----
N-MeFOSA	ND(W/B)	----	----	381694	1	----	ng/mL	----
N-MeFOSE-d7	Auto	5.593	514307	4711087	26	3.4445	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.593	514307	514307	20	5.0000	ng/mL	----
N-MeFOSE	M	5.594	353	514307	20	0.0024	ng/mL	----
N-EtFOSAA	Auto	5.101	781	477955	21	0.0466	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.094	477955	477955	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.094	477955	4711087	26	3.4825	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.759	594069	594069	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.759	594069	4711087	26	3.4469	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	594069	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.725	550142	550142	24	5.0000	ng/mL	----

Insight Report

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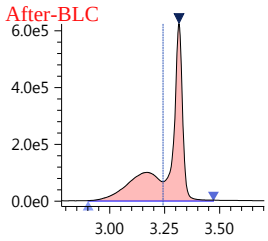
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.725	550142	4711087	26	3.4140	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	550142	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.073	4711087	4711087	26	5.0000	ng/mL	----

PFBA-13C_IS
Conc 5.0000
RT 3.315 Area 2704459
ISTD 216.90>172.15 (-) 6.25e5



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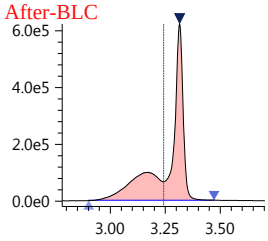
Conc 4.3370
RT 3.315 Area 2621793
Q 216.90>172.15 (-) 6.25e5



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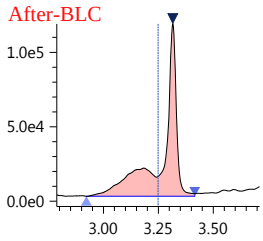
Conc 1.0342
RT 3.316 Area 493356
Q 213.00>169.10 (-) 1.19e5



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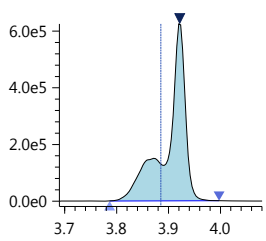
RT 3.921 Area 1536908
ISTD 267.90>223.00 (-) 6.26e5



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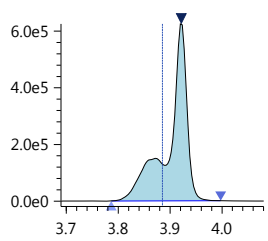

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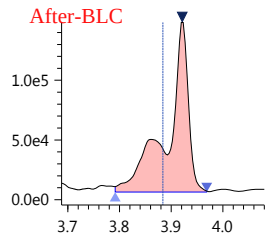
Conc 0.4562
RT 3.921 Area 404375
Q 263.05>219.10 (-) 1.48e5



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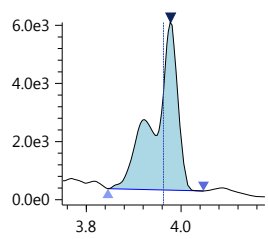
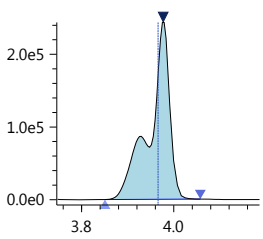
Conc 0.1325
RT 3.978 Area 19938
Q 299.00>80.00 (-) 6.10e3



PFBS-13C
Conc 3.9167
RT 3.977 Area 738432
Q 301.80>80.00 (-) 2.44e5



PFBS-13C_IS
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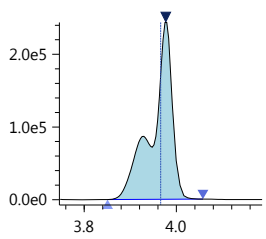
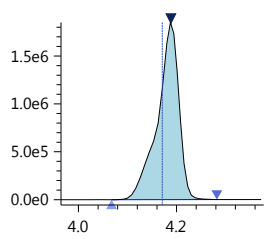
ISTD 301.80>80.00 (-) 2.44e5



PFHxA-13C_IS
Conc 5.0000
RT 4.188 Area 5528326
ISTD 314.90>270.10 (-) 1.85e6



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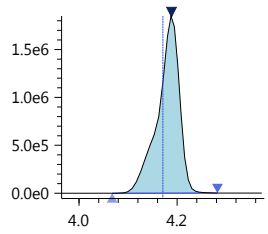
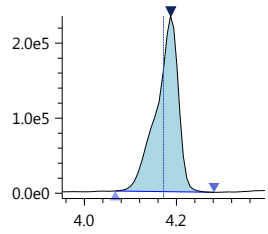
Conc 4.9145
RT 4.188 Area 5528326
Q 314.90>270.10 (-) 1.85e6



PFHxA
Conc 0.7892
RT 4.188 Area 771162
Q 313.00>269.00 (-) 2.36e5



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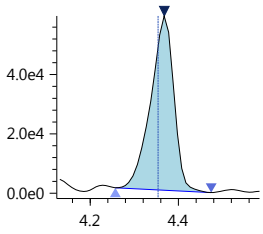
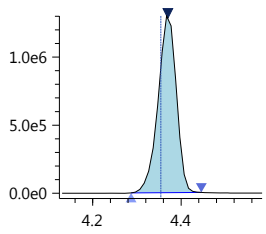
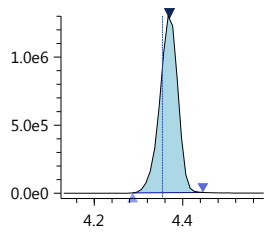
Q 362.90>319.00 (-) 5.98e4



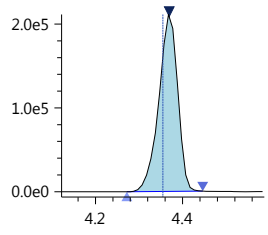
PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 3749829
ISTD 366.90>322.10 (-) 1.30e6



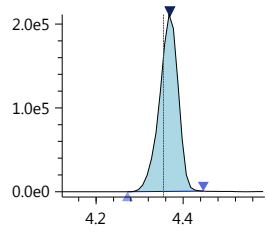
PFHpA-13C
Conc 4.4437
RT 4.370 Area 3749829
Q 366.90>322.10 (-) 1.30e6



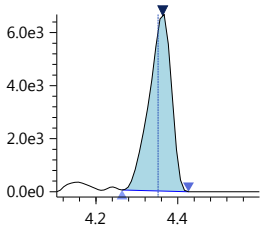
PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 637846
ISTD 402.70>84.05 (-) 2.11e5



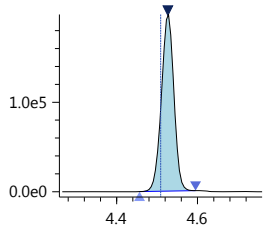
PFHxS-18O
Conc 4.9039
RT 4.369 Area 637846
Q 402.70>84.05 (-) 2.11e5



PFHxS_1
Conc 0.2057
RT 4.363 Area 25284
Q 399.00>80.00 (-) 6.68e3



6_2-FTS-13C
Conc 3.6355
RT 4.527 Area 425439
Q 428.90>409.00 (-) 1.98e5



6_2-FTS-13C_IS
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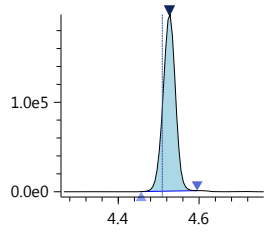
RT 4.527 Area 425439
ISTD 428.90>409.00 (-) 1.98e5



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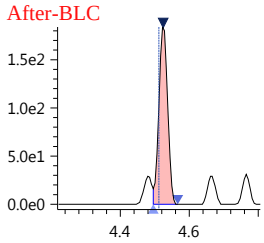
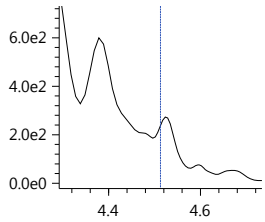
6_2-FTS_1
Conc 0.0042
RT 4.524 Area 326
Q 427.00>407.00 (-) 1.84e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 7.31e2



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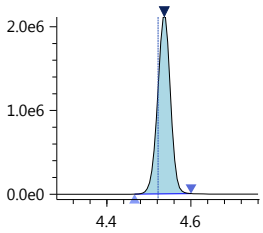
ISTD 416.80>372.05 (-) 2.12e6



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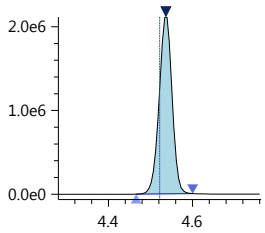
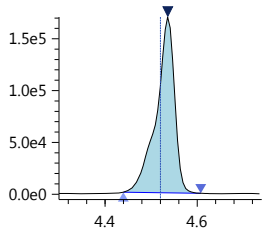
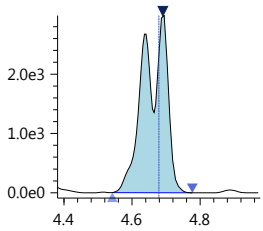
Q 416.80>372.05 (-) 2.12e6



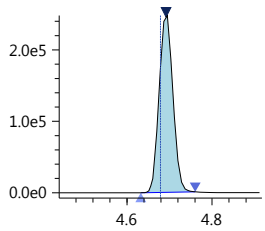
PFOA
Conc 0.6209
RT 4.536 Area 464565
Q 413.00>369.00 (-) 1.71e5



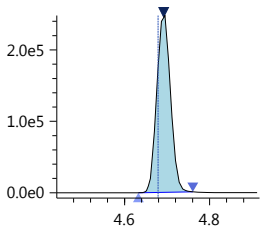
PFOS_1
Conc 0.1747
RT 4.691 Area 14495
Q 499.00>80.00 (-) 2.99e3



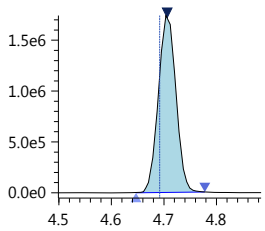
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 562563
ISTD 502.80>80.05 (-) 2.48e5



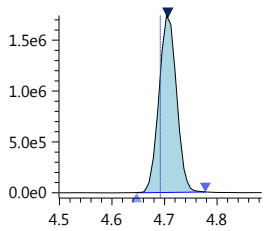
PFOS-13C
Conc 4.1440
RT 4.692 Area 562563
Q 502.80>80.05 (-) 2.48e5



PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4059591
ISTD 467.80>423.00 (-) 1.74e6



PFNA-13C
Conc 4.3375
RT 4.706 Area 4059591
Q 467.80>423.00 (-) 1.74e6



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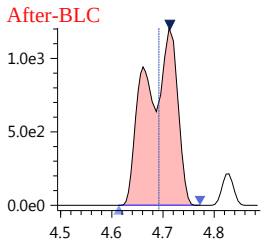
Conc 0.0123
RT 4.713 Area 5024
Q 463.00>418.90 (-) 1.21e3



PFDA-13C_IS
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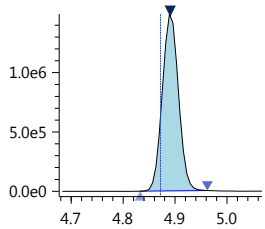
ISTD 514.80>469.95 (-) 1.49e6



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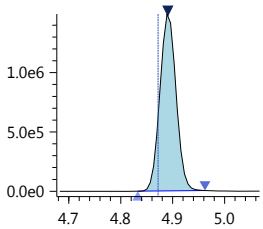
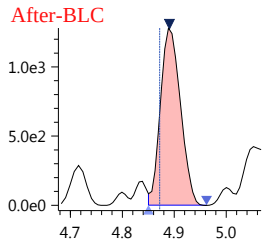
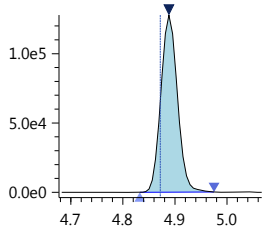
Q 514.80>469.95 (-) 1.49e6



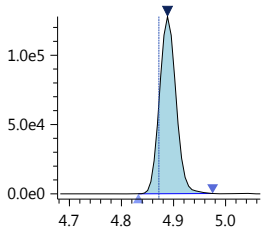
PFDA
Conc 0.0063
RT 4.891 Area 3430
Q 513.00>468.80 (-) 1.28e3



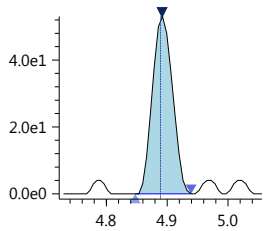
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 283547
ISTD 528.80>509.00 (-) 1.28e5



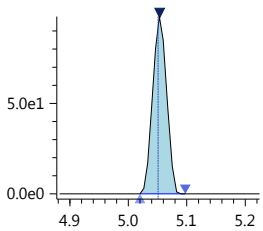
8_2-FTS-13C
Conc 3.1157
RT 4.888 Area 283547
Q 528.80>509.00 (-) 1.28e5



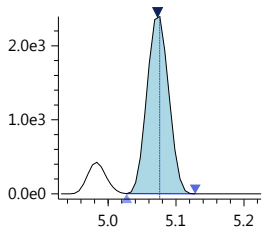
8_2-FTS_1
Conc 0.0025
RT 4.891 Area 123
Q 527.10>506.90 (-) 5.30e1



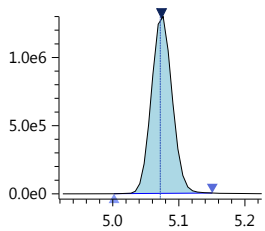
PFDS_1
Conc 0.0016
RT 5.054 Area 164
Q 599.00>79.90 (-) 9.80e1



PFUnA
Conc 0.0114
RT 5.073 Area 5424
Q 563.00>518.90 (-) 2.40e3



PFUnA-13C_IS
Conc 5.0000
RT 5.074 Area 2869456
ISTD 564.80>519.95 (-) 1.30e6



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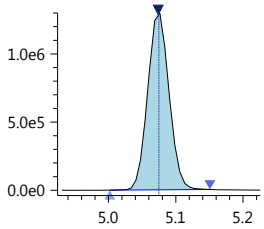
PFUnA-13C
Conc 3.7535
RT 5.074 Area 2869456
Q 564.80>519.95 (-) 1.30e6



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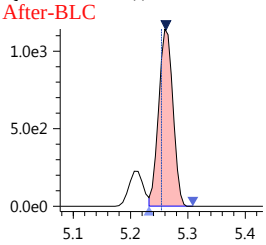
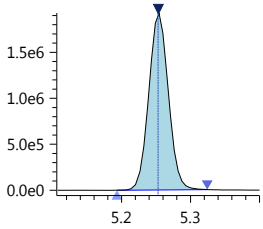
Conc 0.0144
RT 5.262 Area 1981
Q 613.05>569.00 (-) 1.14e3
After-BLC



PFDoA-13C
Conc 3.4188
RT 5.253 Area 3792267
Q 614.80>569.95 (-) 1.93e6



PFDoA-13C_IS
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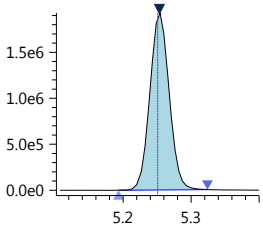
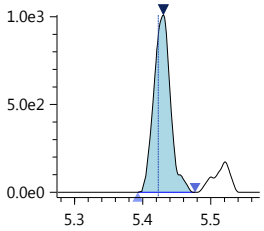
RT 5.253 Area 3792267
ISTD 614.80>569.95 (-) 1.93e6



PFTrDA
Conc 0.0018
RT 5.430 Area 1737
Q 663.00>618.90 (-) 1.01e3



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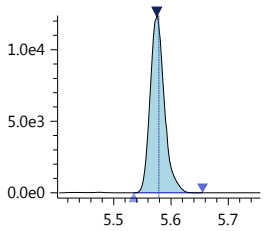
Conc 0.0262
RT 5.575 Area 21341
Q 713.40>669.00 (-) 1.24e4



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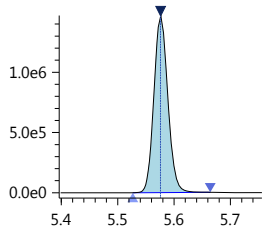
Conc 3.1848
RT 5.576 Area 2527821
Q 714.70>669.90 (-) 1.47e6



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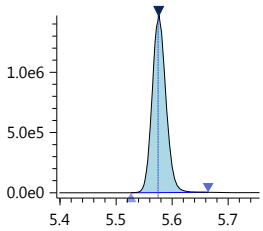
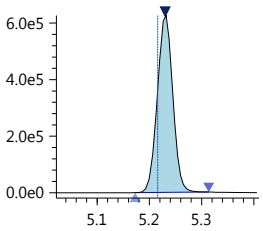
RT 5.576 Area 2527821
ISTD 714.70>669.90 (-) 1.47e6



FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1286960
ISTD 506.00>78.05 (-) 6.27e5



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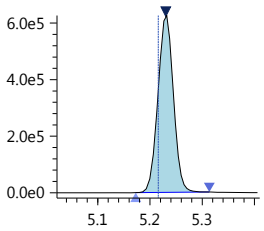
Q 506.00>78.05 (-) 6.27e5



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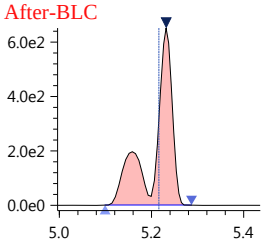
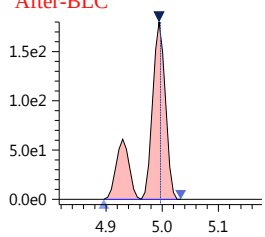
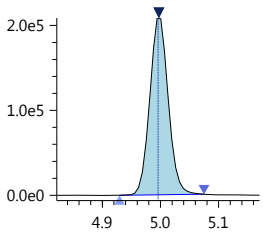
Conc 0.0053
RT 5.232 Area 1816
Q 498.20>78.00 (-) 6.52e2
After-BLC



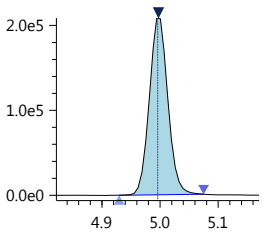
N-MeFOSAA
Conc 0.0078
RT 4.994 Area 380
Q 570.20>419.00 (-) 1.80e2
After-BLC



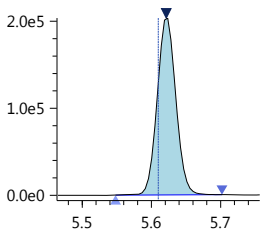
N-MeFOSAA-d3
Conc 3.2321
RT 4.997 Area 462045
Q 572.80>419.05 (-) 2.09e5



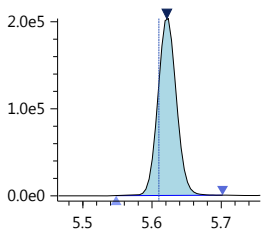
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.997 Area 462045
ISTD 572.80>419.05 (-) 2.09e5



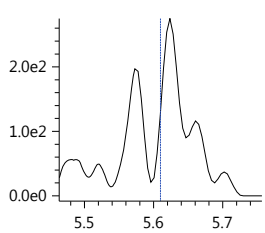
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 381694
ISTD 514.90>168.90 (-) 2.04e5



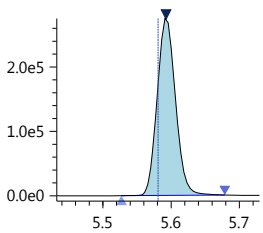
N-MeFOSA-d3
Conc 3.7135
RT 5.622 Area 381694
Q 514.90>168.90 (-) 2.04e5



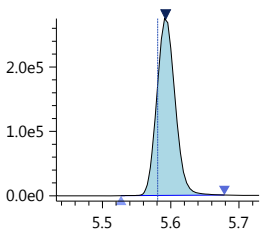
N-MeFOSA
Conc ----
RT ---- Area ----
Q 512.00>169.10 (-) 2.75e2



N-MeFOSE-d7
Conc 3.4445
RT 5.593 Area 514307
Q 622.70>59.10 (-) 2.75e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.593 Area 514307
ISTD 622.70>59.10 (-) 2.75e5



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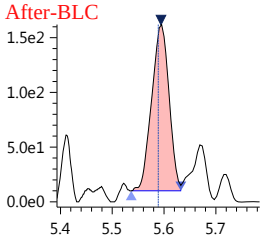
Conc 0.0024
RT 5.594 Area 353
Q 616.00>59.00 (-) 1.62e2
After-BLC



Insight Report

Printed at 1/18/2019 10:42:01 AM

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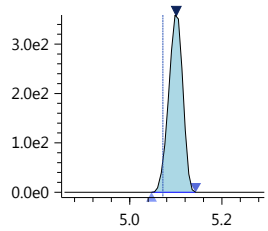
Conc 0.0466
RT 5.101 Area 781
Q 584.20>418.95 (-) 3.59e2



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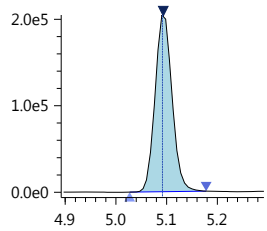
Conc 5.0000
RT 5.094 Area 477955
ISTD 588.80>419.00 (-) 2.05e5



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Conc 3.4825
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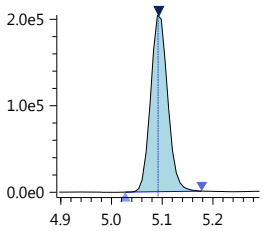
Q 588.80>419.00 (-) 2.05e5



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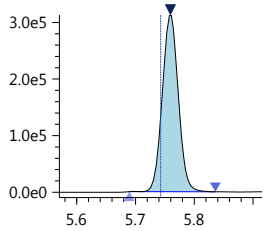
Conc 5.0000
RT 5.759 Area 594069
ISTD 530.90>169.15 (-) 3.13e5



N-EtFOSA-d9
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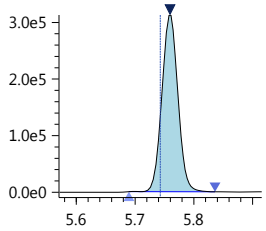
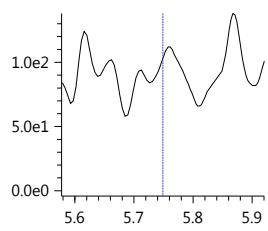
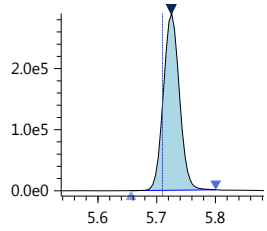
RT 5.759 Area 594069
Q 530.90>169.15 (-) 3.13e5



N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.38e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.725 Area 550142
ISTD 638.70>59.10 (-) 2.90e5



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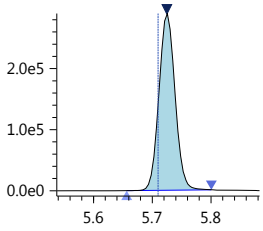
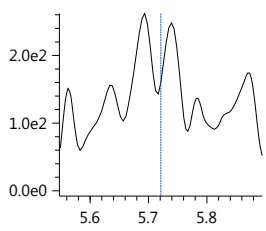
RT 5.725 Area 550142
Q 638.70>59.10 (-) 2.90e5



N-EtFOSE
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 2.62e2



13C7-PFUnDA_IS
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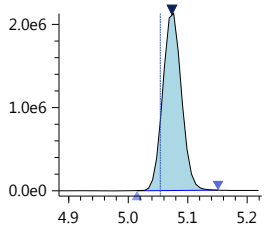
RT 5.073 Area 4711087
ISTD 570.00>525.00 (-) 2.13e6



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Printed at 1/18/2019 8:51:07 AM

010419_128

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Acquired by: System Administrator
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PFBA-13C_IS
Conc 5.0000
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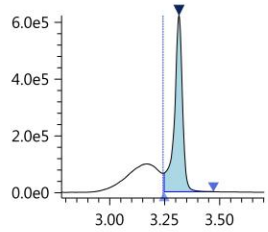
ISTD 216.90>172.15 (-) 6.25e5



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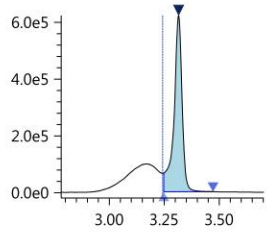

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Conc 0.8123
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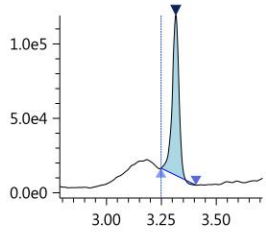
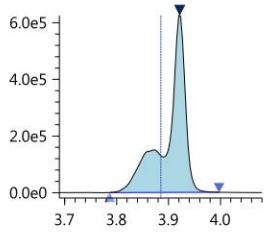
Q 213.00>169.10 (-) 1.19e5



PFPeA-13C_IS
Conc 5.0000
RT 3.921 Area 1536908
ISTD 267.90>223.00 (-) 6.26e5



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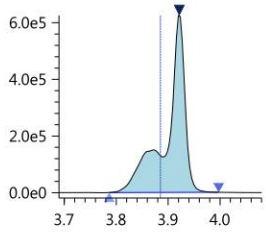
Q 267.90>223.00 (-) 6.26e5



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Conc 0.4205
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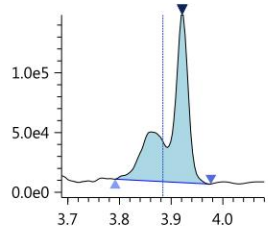

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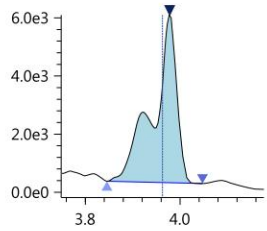
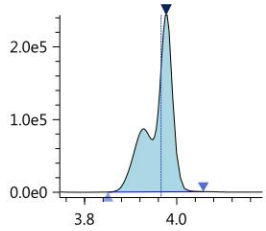
Conc 0.1325
RT 3.978 Area 19938
Q 299.00>80.00 (-) 6.10e3



PFBS-13C
Conc 3.9167
RT 3.977 Area 738432
Q 301.80>80.00 (-) 2.44e5



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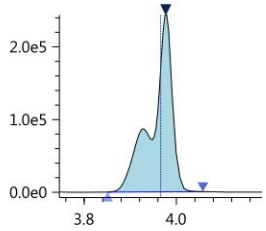
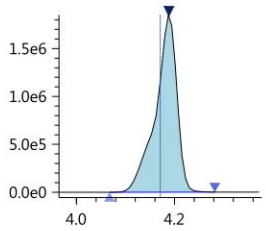


PFHxA-13C_IS
Conc 5.0000
RT 4.188 Area 5528326
ISTD 314.90>270.10 (-) 1.85e6



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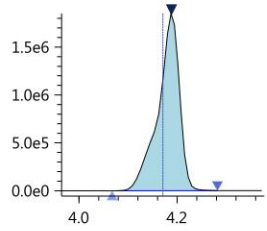

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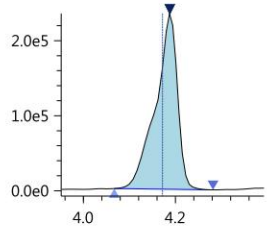
RT 4.188 Area 771162
Q 313.00>269.00 (-) 2.36e5



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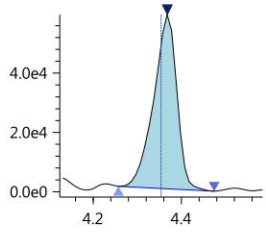
RT 4.368 Area 214006
Q 362.90>319.00 (-) 5.98e4



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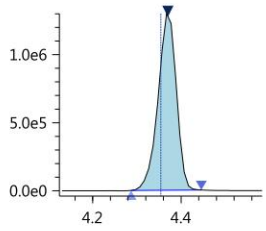
ISTD 366.90>322.10 (-) 1.30e6



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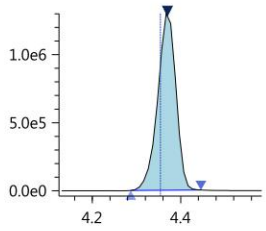
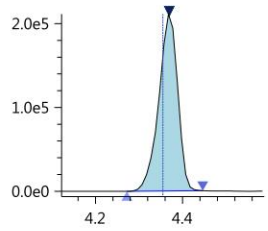
Conc 4.4437
RT 4.370 Area 3749829
Q 366.90>322.10 (-) 1.30e6



PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 637846
ISTD 402.70>84.05 (-) 2.11e5



PFHxS-18O
Conc 4.9039
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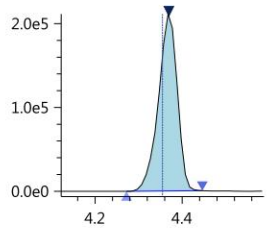
Q 402.70>84.05 (-) 2.11e5



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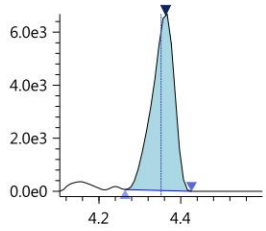
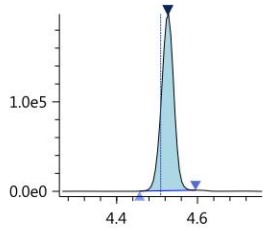
Conc 0.2057
RT 4.363 Area 25284
Q 399.00>80.00 (-) 6.68e3



6_2-FTS-13C
Conc 3.6355
RT 4.527 Area 425439
Q 428.90>409.00 (-) 1.98e5



6_2-FTS-13C_IS
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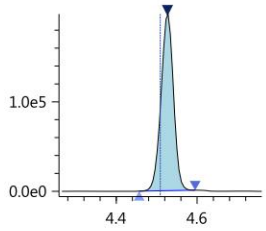

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Printed at 1/18/2019 8:51:07 AM

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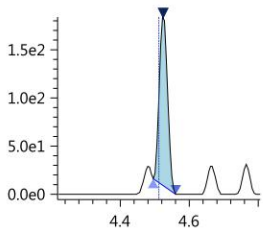
Q 427.00>407.00 (-) 1.84e2



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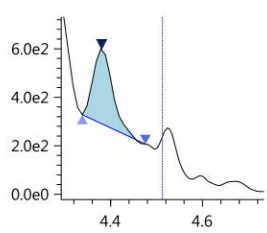
Q 449.00>80.15 (-) 7.31e2



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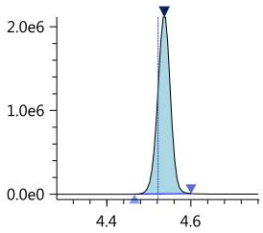

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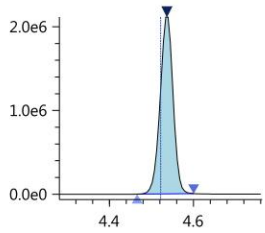

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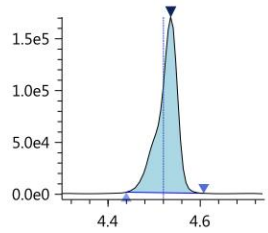
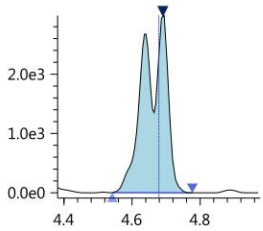
RT 4.536 Area 464565
Q 413.00>369.00 (-) 1.71e5



PFOS_1
Conc 0.1747
RT 4.691 Area 14495
Q 499.00>80.00 (-) 2.99e3



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Conc 5.0000
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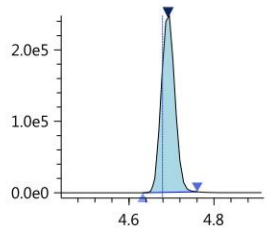
ISTD 502.80>80.05 (-) 2.48e5



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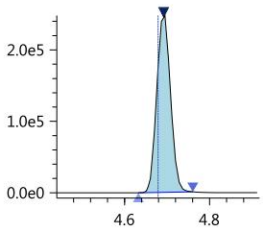

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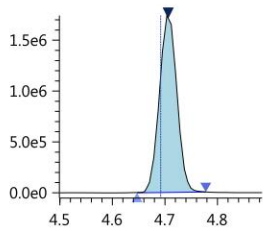
Conc 5.0000
RT 4.706 Area 4059591
ISTD 467.80>423.00 (-) 1.74e6



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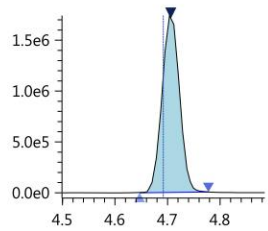
RT 4.706 Area 4059591
Q 467.80>423.00 (-) 1.74e6



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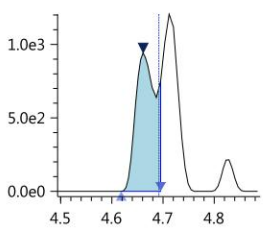
RT 4.661 Area 2569
Q 463.00>418.90 (-) 1.21e3



PFDA-13C_IS
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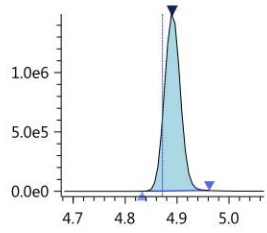
ISTD 514.80>469.95 (-) 1.49e6



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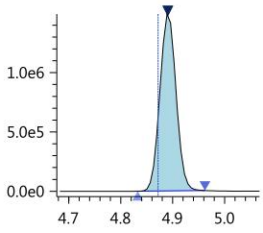
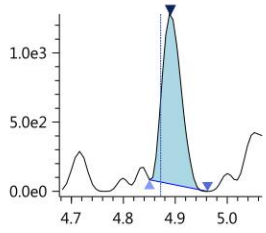
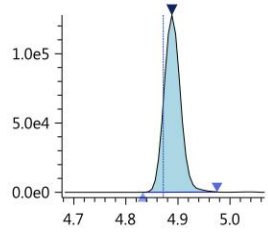
Conc 3.9761
RT 4.891 Area 3248598
Q 514.80>469.95 (-) 1.49e6



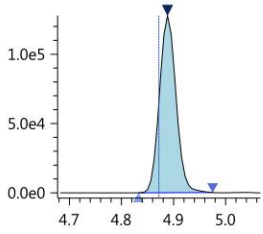
PFDA
Conc 0.0058
RT 4.891 Area 3159
Q 513.00>468.80 (-) 1.28e3



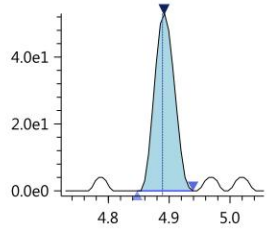
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 283547
ISTD 528.80>509.00 (-) 1.28e5



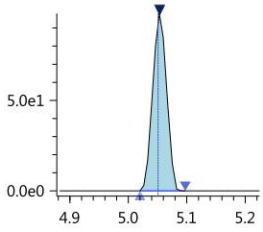
8_2-FTS-13C
Conc 3.1157
RT 4.888 Area 283547
Q 528.80>509.00 (-) 1.28e5



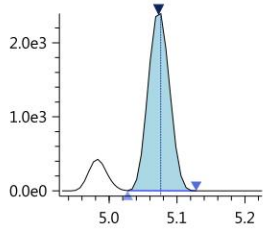
8_2-FTS_1
Conc 0.0025
RT 4.891 Area 123
Q 527.10>506.90 (-) 5.30e1



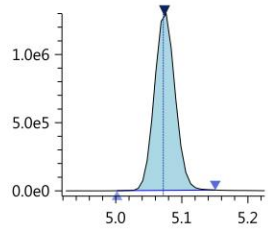
PFDS_1
Conc 0.0016
RT 5.054 Area 164
Q 599.00>79.90 (-) 9.80e1



PFUnA
Conc 0.0114
RT 5.073 Area 5424
Q 563.00>518.90 (-) 2.40e3



PFUnA-13C_IS
Conc 5.0000
RT 5.074 Area 2869456
ISTD 564.80>519.95 (-) 1.30e6



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PFUnA-13C
Conc 3.7535
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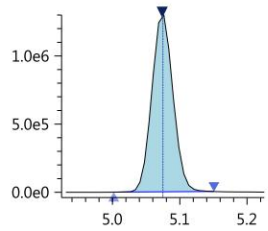
Q 564.80>519.95 (-) 1.30e6



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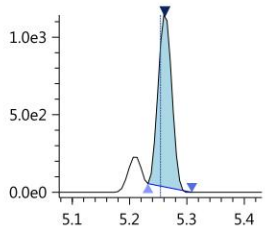
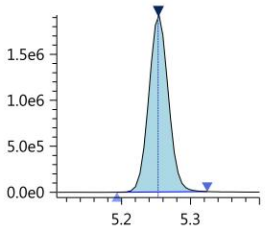
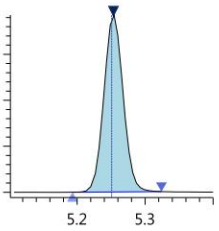
Conc 0.0141
RT 5.262 Area 1860
Q 613.05>569.00 (-) 1.14e3



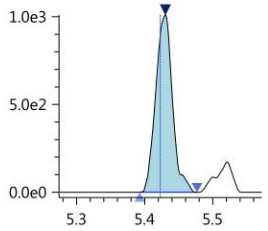
PFDoA-13C
Conc 3.4188
RT 5.253 Area 3792267
Q 614.80>569.95 (-) 1.93e6



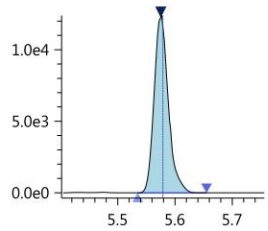
PFDoA-13C_IS
Conc 5.0000
RT 5.253 Area 3792267
ISTD 614.80>569.95 (-) 1.93e6



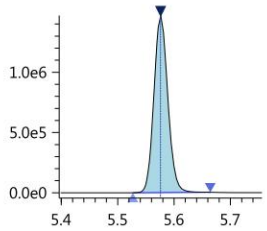
PFTrDA
Conc 0.0018
RT 5.430 Area 1737
Q 663.00>618.90 (-) 1.01e3



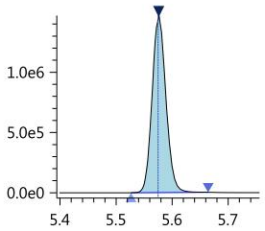
PFTeDA
Conc 0.0262
RT 5.575 Area 21341
Q 713.40>669.00 (-) 1.24e4



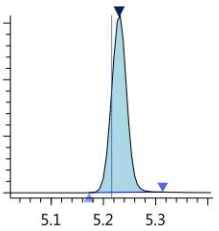
PFTeDA-13C
Conc 3.1848
RT 5.576 Area 2527821
Q 714.70>669.90 (-) 1.47e6



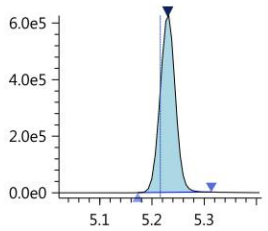
PFTeDA-13C_IS
Conc 5.0000
RT 5.576 Area 2527821
ISTD 714.70>669.90 (-) 1.47e6



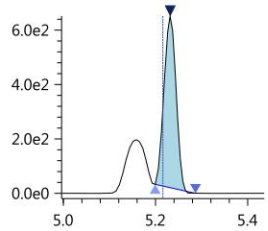
FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1286960
ISTD 506.00>78.05 (-) 6.27e5



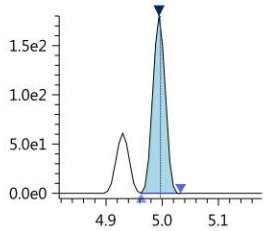
FOSA-13C
Conc 3.5630
RT 5.230 Area 1286960
Q 506.00>78.05 (-) 6.27e5



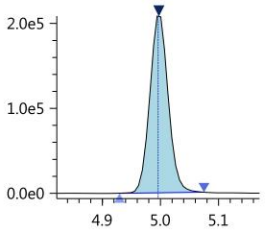
FOSA
Conc 0.0033
RT 5.232 Area 1143
Q 498.20>78.00 (-) 6.52e2



N-MeFOSAA
Conc 0.0058
RT 4.994 Area 281
Q 570.20>419.00 (-) 1.80e2



N-MeFOSAA-d3
Conc 3.2321
RT 4.997 Area 462045
Q 572.80>419.05 (-) 2.09e5



N-MeFOSAA-d3_IS
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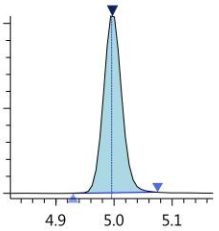
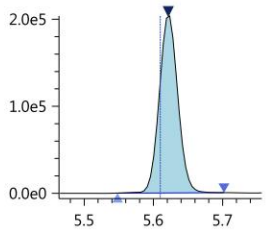
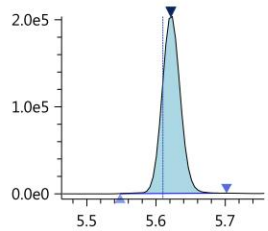
RT 4.997 Area 462045
ISTD 572.80>419.05 (-) 2.09e5



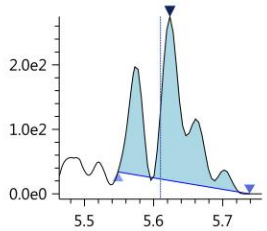
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 381694
ISTD 514.90>168.90 (-) 2.04e5



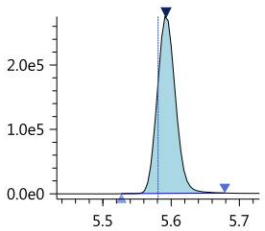
N-MeFOSA-d3
Conc 3.7135
RT 5.622 Area 381694
Q 514.90>168.90 (-) 2.04e5



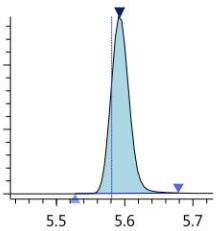
N-MeFOSA
Conc 0.0084
RT 5.623 Area 844
Q 512.00>169.10 (-) 2.75e2



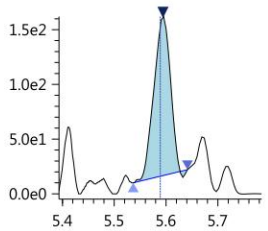
N-MeFOSE-d7
Conc 3.4445
RT 5.593 Area 514307
Q 622.70>59.10 (-) 2.75e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.593 Area 514307
ISTD 622.70>59.10 (-) 2.75e5



N-MeFOSE
Conc 0.0021
RT 5.594 Area 320
Q 616.00>59.00 (-) 1.62e2



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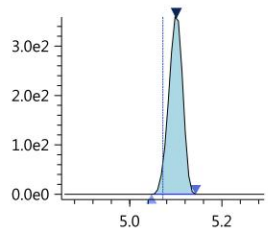
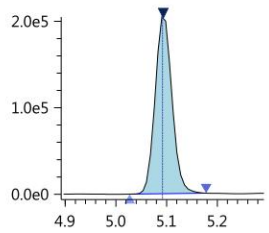
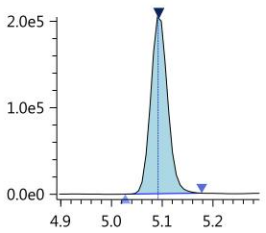
N-EtFOSAA
Conc 0.0466
RT 5.101 Area 781
Q 584.20>418.95 (-) 3.59e2



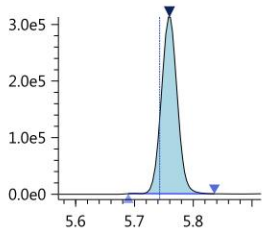
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.094 Area 477955
ISTD 588.80>419.00 (-) 2.05e5



N-EtFOSAA-d5
Conc 3.4825
RT 5.094 Area 477955
Q 588.80>419.00 (-) 2.05e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.759 Area 594069
ISTD 530.90>169.15 (-) 3.13e5



N-EtFOSA-d9
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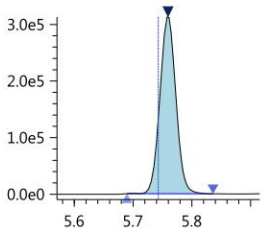
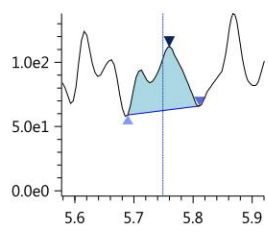
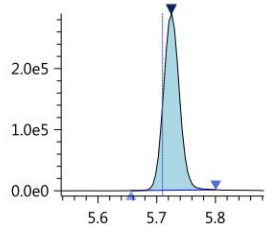
Q 530.90>169.15 (-) 3.13e5



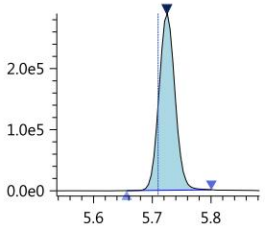
N-EtFOSA
Conc 0.0093
RT 5.760 Area 197
Q 526.90>169.10 (-) 1.38e2



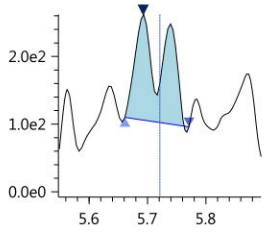
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.725 Area 550142
ISTD 638.70>59.10 (-) 2.90e5



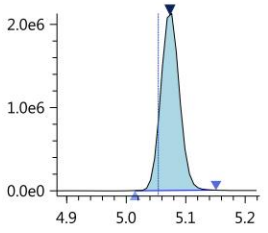
N-EtFOSE-d9
Conc 3.4140
RT 5.725 Area 550142
Q 638.70>59.10 (-) 2.90e5



N-EtFOSE
Conc 0.0041
RT 5.693 Area 542
Q 630.00>58.90 (-) 2.62e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.073 Area 4711087
ISTD 570.00>525.00 (-) 2.13e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_048
Lab ID: KQ1818316-06
RunType: MB
Matrix: Soil

Date Acquired: 12/21/18 03:19
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	D3-MeFOSAA	174	70	130	Native ok
	13C2-6:2 FTS	58	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D5-EtFOSAA	184	70	130	Native ok
Surrogates	D5-EtFOSAA	156	29	153	High Bias ND

Primary Review: _____

Printed: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_048	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:19	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818316-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**	328407	**Report Group:**	KQ1818316
Analysis	PFC/537M	**Prep Method:**	EPA 3550B		
		Prep Date:	12/17/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.065	+0.01	6777908	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.970	+0.00	1239515	4.3358	87		33 - 109	Y
18O2-PFHxS	4.358	0.00	642066	3.7506	75		36 - 120	Y
13C4-PFOS	4.684	+0.00	676438	3.8820	78		32 - 130	Y
13C4-PFBA	3.296	-0.02	3796419	4.5009	90		34 - 116	Y
13C5-PFPeA	3.914		2285011	5.4064	108		39 - 133	Y
13C2-PFHxA	4.180	+0.00	7256228	4.8842	98		32 - 136	Y
13C4-PFHpA	4.358	0.00	4535315	4.1871	84		36 - 133	Y
13C4-PFOA	4.530	+0.00	7360862	4.2742	85		31 - 134	Y
13C5-PFNA	4.698	+0.00	4874079	4.3399	87		27 - 133	Y
13C2-PFDA	4.883	+0.01	4196915	4.0710	81		30 - 137	Y
13C2-PFUnDA	5.065	+0.01	5364992	4.5510	91		32 - 146	Y
13C2-PFDoDA	5.244	+0.01	7524903	4.4359	89		36 - 136	Y
13C2-PFTeDA	5.567	+0.00	6535498	5.2266	105		39 - 138	Y
13C8-FOSA	5.222	+0.01	2108832	5.1330	103		40 - 132	Y
D3-MeFOSAA	4.988	+0.01	1062686	7.5502	151		20 - 154	Y
D5-EtFOSAA	5.084	+0.01	1142573	7.8162	156	*	29 - 153	Y
13C2-6:2 FTS	4.520	+0.00	558119	2.5528	51		30 - 140	Y
13C2-8:2 FTS	4.881	+0.00	372594	2.5270	51		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.952	-0.02	435	0.0020	0.016	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.362	+0.00	2034	0.0153	0.12	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

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Data File:	J:\LCMS06\Data\122018_b3\122018_048	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:19	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818316-06	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

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)	4.672	-0.01	208	0.0022	0.018	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.914		106870	0.0017	0.014	U	Y
Perfluorohexanoic acid (PFHxA)	4.177		12531	0.0088	0.070	U	Y
Perfluoroheptanoic acid (PFHpA)	4.346	-0.01	6227	0.0067	0.054	U	Y
Perfluorooctanoic acid (PFOA)	4.530	+0.00	9925	0.0090	0.072	U	Y
Perfluorononanoic acid (PFNA)	0		0	0	0	U	Y
Perfluorodecanoic acid (PFDA)	4.875	0.00	1690	0.0024	0.019	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.060		9595	0.0083	0.066	U	Y
Perfluorododecanoic acid (PFDoDA)	5.253	+0.01	661	0.0076	0.061	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.415	+0.01	2157	0.0015	0.012	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.566	+0.00	42322	-0.0017	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.224	+0.01	691	0.0010	0.0080	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.982	0.00	568	0.0050	0.040	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.547	+0.03	63	0.0007	0.0056	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.865	-0.01	93	0.0014	0.011	U	Y

Prep Amount:	1 g	**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 1/14/2019 12:39:49 PM

122018_048

Sample ID: KQ1818316-06
Date acquired: 12/21/2018 3:19:18 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_048.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.296	3776922	3776922	2	5.0000	ng/mL	----
PFBA-13C	M	3.296	3796419	6777908	26	4.5009	ng/mL	----
PFBA	ND(W/B)	----	----	3776922	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.914	2285011	2285011	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.914	2285011	6777908	26	5.4064	ng/mL	----
PFPeA	Auto	3.914	106870	2285011	4	0.0017	ng/mL	----
PFBS_1	M	3.952	435	1239515	16	0.0020	ng/mL	----
PFBS-13C	Auto	3.970	1239515	6777908	26	4.3358	ng/mL	----
PFBS-13C_IS	Auto	3.970	1239515	1239515	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.180	7256228	7256228	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.180	7256228	6777908	26	4.8842	ng/mL	----
PFHxA	Auto	4.177	12531	7256228	6	0.0088	ng/mL	----
PFHpA	M	4.346	6227	4535315	8	0.0067	ng/mL	----
PFHpA-13C_IS	Auto	4.358	4535315	4535315	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.358	4535315	6777908	26	4.1871	ng/mL	----
PFHxS-18O_IS	Auto	4.358	642066	642066	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.358	642066	6777908	26	3.7506	ng/mL	----
PFHxS_1	Auto	4.362	2034	642066	7	0.0153	ng/mL	----
6_2-FTS-13C	Auto	4.520	558119	6777908	26	2.5528	ng/mL	----
6_2-FTS-13C_IS	Auto	4.520	558119	558119	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.547	63	558119	10	0.0007	ng/mL	----
PFHpS_1	ND(W/B)	----	----	642066	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.530	7360862	7360862	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.530	7360862	6777908	26	4.2742	ng/mL	----
PFOA	Auto	4.530	9925	7360862	9	0.0090	ng/mL	----
PFOS_1	Auto	4.672	208	676438	13	0.0022	ng/mL	----
PFOS-13C_IS	Auto	4.684	676438	676438	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.684	676438	6777908	26	3.8820	ng/mL	----
PFNA-13C_IS	Auto	4.698	4874079	4874079	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.698	4874079	6777908	26	4.3399	ng/mL	----
PFNA	ND(W/B)	----	----	4874079	11	----	ng/mL	----
PFDA-13C_IS	Auto	4.883	4196915	4196915	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.883	4196915	6777908	26	4.0710	ng/mL	----
PFDA	Auto	4.875	1690	4196915	12	0.0024	ng/mL	----
8_2-FTS-13C_IS	Auto	4.881	372594	372594	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.881	372594	6777908	26	2.5270	ng/mL	----
8_2-FTS_1	M	4.865	93	372594	15	0.0014	ng/mL	----
PFDS_1	ND(W/B)	----	----	676438	13	----	ng/mL	----
PFUnA	Auto	5.060	9595	5364992	14	0.0083	ng/mL	----
PFUnA-13C_IS	Auto	5.065	5364992	5364992	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.065	5364992	6777908	26	4.5510	ng/mL	----
PFDoA	Auto	5.253	661	7524903	17	0.0076	ng/mL	----
PFDoA-13C	Auto	5.244	7524903	6777908	26	4.4359	ng/mL	----
PFDoA-13C_IS	Auto	5.244	7524903	7524903	17	5.0000	ng/mL	----
PFTrDA	Auto	5.415	2157	6535498	22	0.0015	ng/mL	----
PFTeDA	Auto	5.566	42322	6535498	22	-0.0017	ng/mL	----
PFTeDA-13C	Auto	5.567	6535498	6777908	26	5.2266	ng/mL	----
PFTeDA-13C_IS	Auto	5.567	6535498	6535498	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.222	2108832	2108832	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.222	2108832	6777908	26	5.1330	ng/mL	----
FOSA	Auto	5.224	691	2108832	18	0.0010	ng/mL	----
N-MeFOSAA	Auto	4.982	568	1062686	19	0.0050	ng/mL	----
N-MeFOSAA-d3	Auto	4.988	1062686	6777908	26	7.5502	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.988	1062686	1062686	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	1142573	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.084	1142573	1142573	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.084	1142573	6777908	26	7.8162	ng/mL	----
13C7-PFUnDA_IS	Auto	5.065	6777908	6777908	26	5.0000	ng/mL	----

Insight Report

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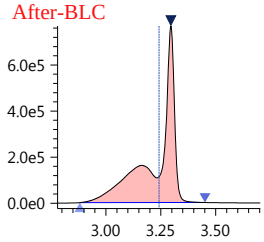
PFBA-13C_IS
Conc 5.0000
RT 3.296 Area 3776922
ISTD 216.90>172.15 (-) 7.69e5
After-BLC



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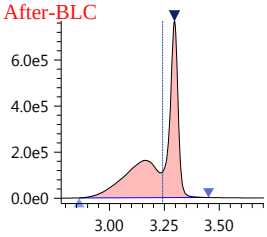
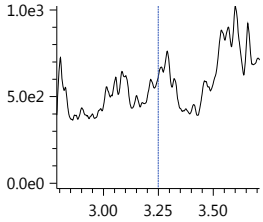
Conc 4.5009
RT 3.296 Area 3796419
Q 216.90>172.15 (-) 7.69e5
After-BLC



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.02e3



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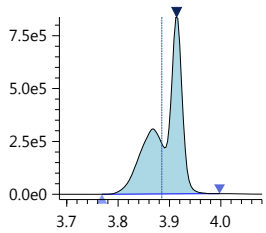
ISTD 267.90>223.00 (-) 8.39e5



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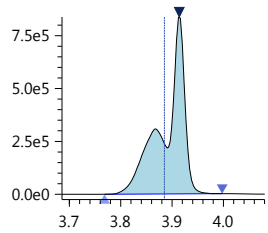
Q 267.90>223.00 (-) 8.39e5



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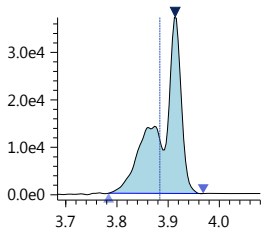
Conc 0.0017
RT 3.914 Area 106870
Q 263.05>219.10 (-) 3.74e4



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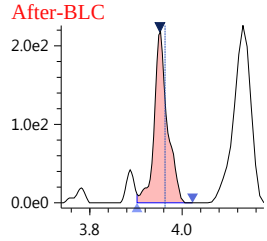
Conc 0.0020
RT 3.952 Area 435
Q 299.00>80.00 (-) 2.26e2
After-BLC



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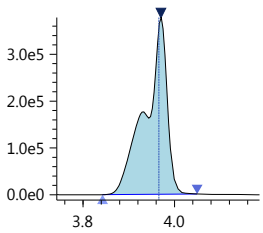
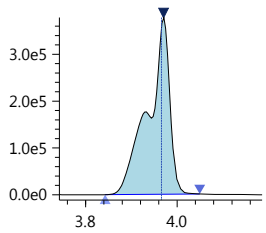
Conc 4.3358
RT 3.970 Area 1239515
Q 301.80>80.00 (-) 3.79e5



PFBS-13C_IS
Conc 5.0000
RT 3.970 Area 1239515
ISTD 301.80>80.00 (-) 3.79e5



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Conc 5.0000
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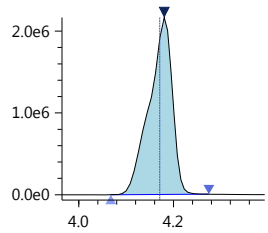
ISTD 314.90>270.10 (-) 2.17e6



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Conc 4.8842
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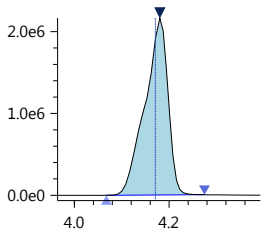
Q 314.90>270.10 (-) 2.17e6



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Conc 0.0088
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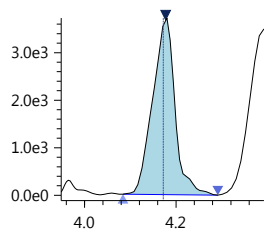
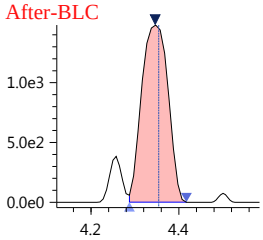


PFHpA
Conc 0.0067
RT 4.346 Area 6227
Q 362.90>319.00 (-) 1.48e3
After-BLC



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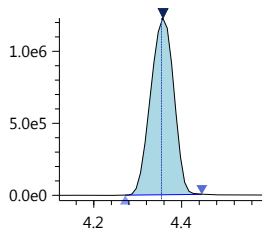
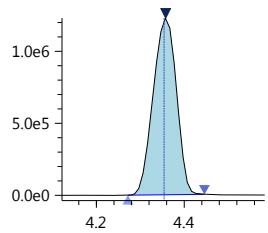
Conc 5.0000
RT 4.358 Area 4535315
ISTD 366.90>322.10 (-) 1.23e6



PFHpA-13C
Conc 4.1871
RT 4.358 Area 4535315
Q 366.90>322.10 (-) 1.23e6



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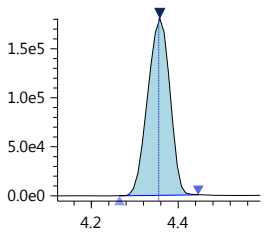
ISTD 402.70>84.05 (-) 1.81e5



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Conc 3.7506
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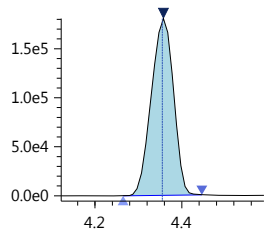
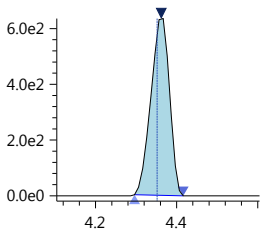
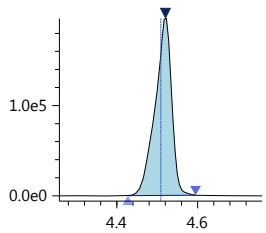
Q 402.70>84.05 (-) 1.81e5



PFHxS_1
Conc 0.0153
RT 4.362 Area 2034
Q 399.00>80.00 (-) 6.36e2



6_2-FTS-13C
Conc 2.5528
RT 4.520 Area 558119
Q 428.90>409.00 (-) 1.96e5



6_2-FTS-13C_IS
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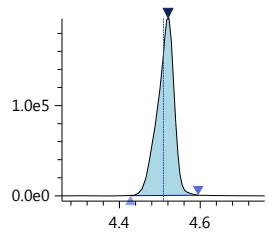

Insight Report

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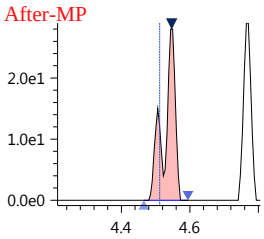
Conc 0.0007
RT 4.547 Area 63
Q 427.00>407.00 (-) 2.90e1



PFHpS_1
Conc ----
RT ---- Area ----
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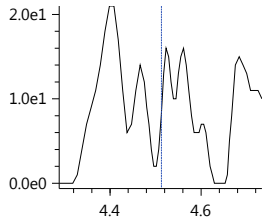

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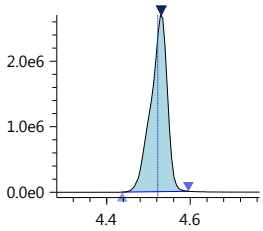
Conc 5.0000
RT 4.530 Area 7360862
ISTD 416.80>372.05 (-) 2.71e6



PFOA-13C
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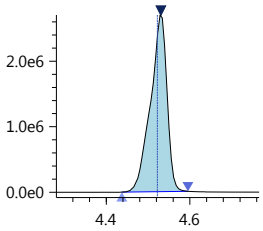
Q 416.80>372.05 (-) 2.71e6



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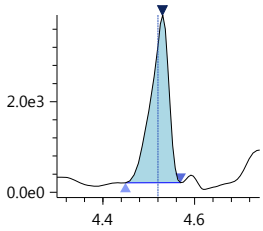
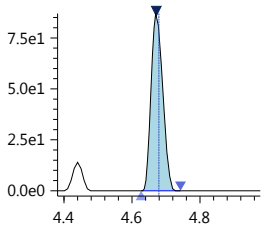
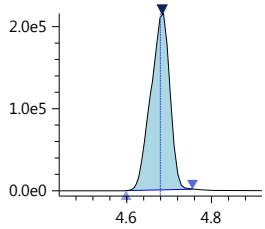
Conc 0.0090
RT 4.530 Area 9925
Q 413.00>369.00 (-) 3.91e3



PFOS_1
Conc 0.0022
RT 4.672 Area 208
Q 499.00>80.00 (-) 8.70e1



PFOS-13C_IS
Conc 5.0000
RT 4.684 Area 676438
ISTD 502.80>80.05 (-) 2.16e5



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Conc 3.8820
RT 4.684 Area 676438
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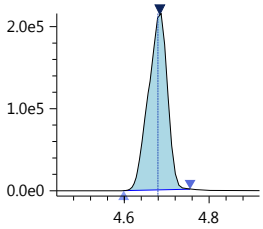

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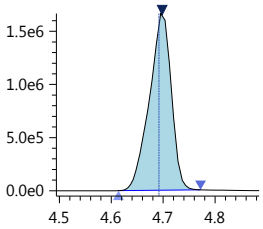
ISTD 467.80>423.00 (-) 1.67e6



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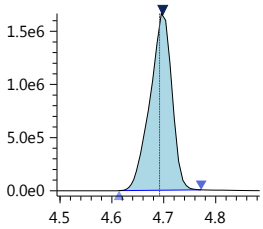
RT 4.698 Area 4874079
Q 467.80>423.00 (-) 1.67e6



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RT ---- Area ----
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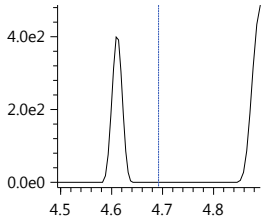

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RT 4.883 Area 4196915
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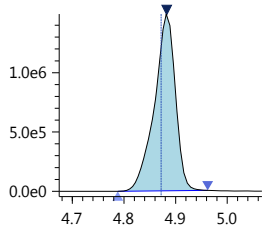

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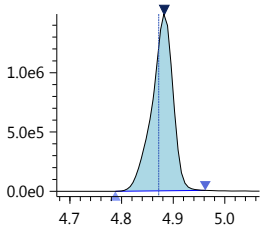

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RT 4.875 Area 1690
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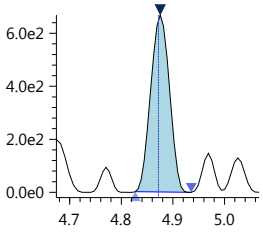

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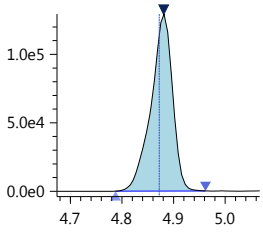
RT 4.881 Area 372594
ISTD 528.80>509.00 (-) 1.29e5



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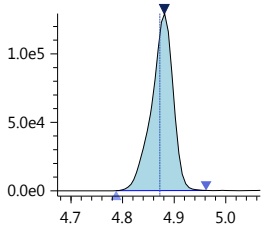

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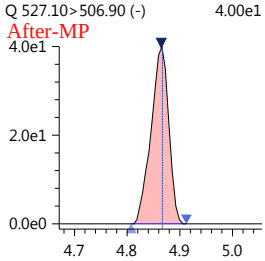
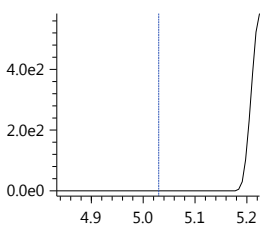
Q 527.10>506.90 (-) 4.00e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 5.84e2



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RT 5.060 Area 9595
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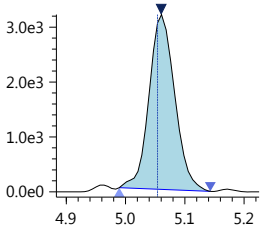

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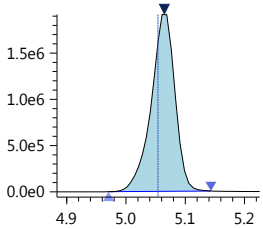

Insight Report

Printed at 1/14/2019 12:39:49 PM

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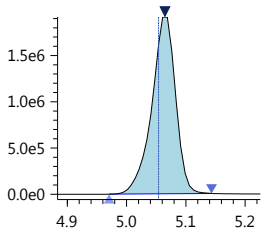
Q 564.80>519.95 (-) 1.92e6



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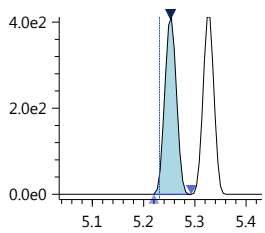

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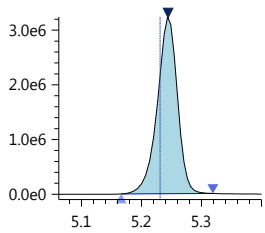
Q 614.80>569.95 (-) 3.24e6



PFDoA-13C_IS
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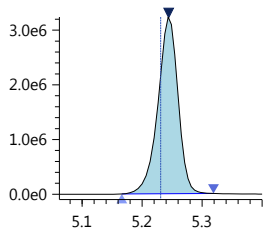

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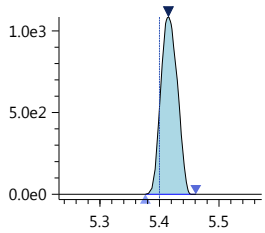

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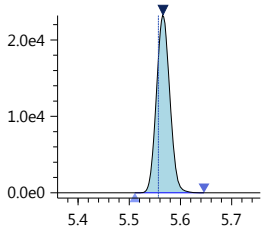

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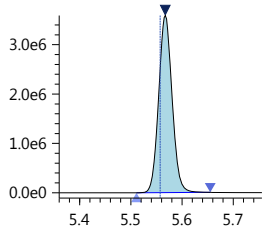

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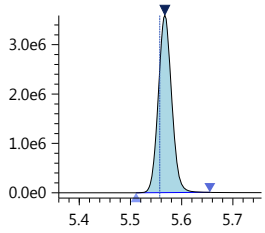

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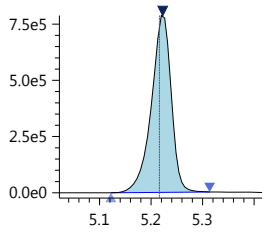

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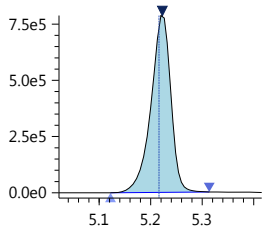

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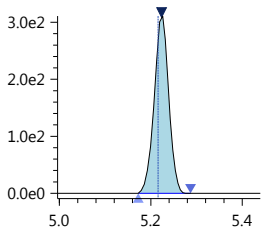

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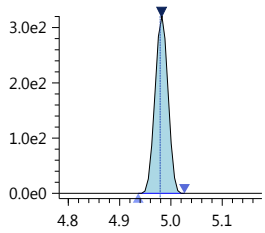
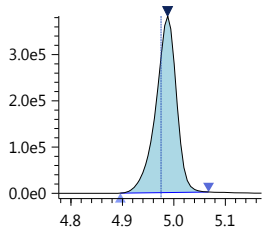
Q 570.20>419.00 (-) 3.21e2



N-MeFOSAA-d3
Conc 7.5502
RT 4.988 Area 1062686
Q 572.80>419.05 (-) 3.83e5



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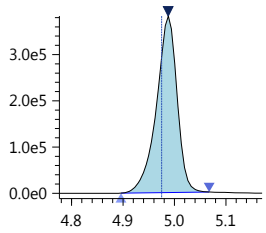
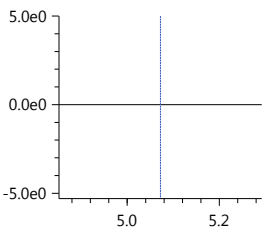
ISTD 572.80>419.05 (-) 3.83e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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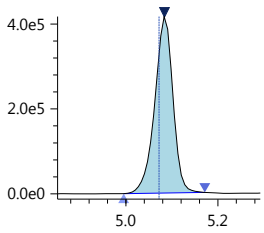

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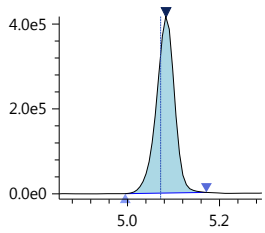

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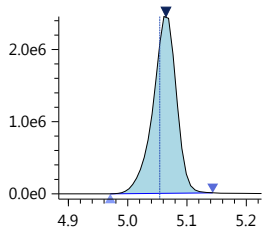
RT 5.065 Area 6777908
ISTD 570.00>525.00 (-) 2.46e6



Insight Report

Printed at 1/14/2019 11:23:27 AM

122018_048

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Date acquired: 12/21/2018 3:19:18 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_048.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 2

PFBA-13C_IS
Conc 5.0000
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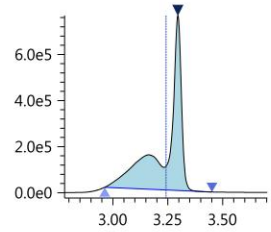

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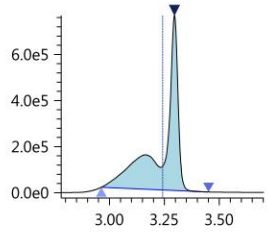

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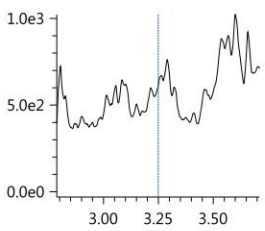
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.02e3



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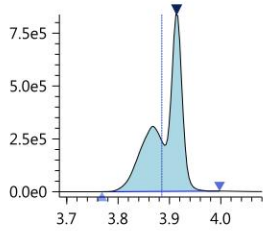

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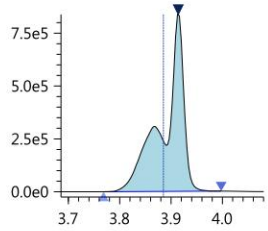

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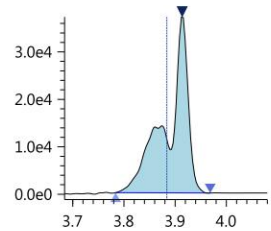
Q 263.05>219.10 (-) 3.74e4



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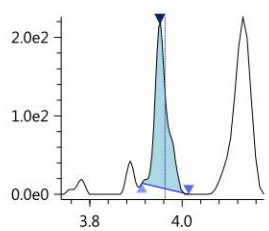

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Conc 4.3358
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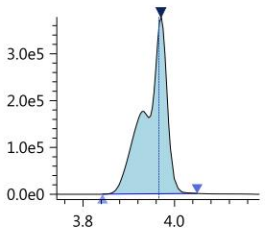
Q 301.80>80.00 (-) 3.79e5



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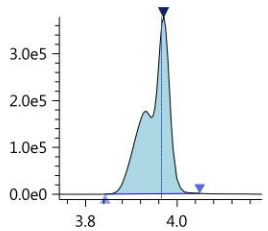

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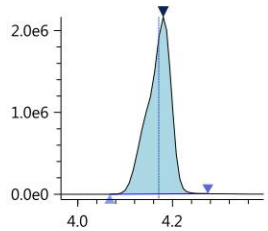

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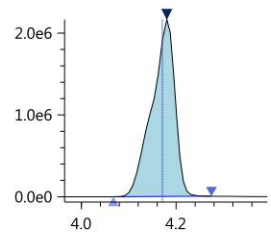
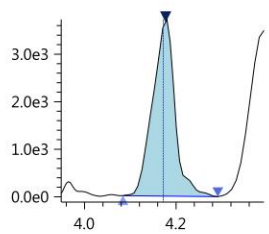
Conc 4.8842
RT 4.180 Area 7256228
Q 314.90>270.10 (-) 2.17e6



PFHxA
Conc 0.0088
RT 4.177 Area 12531
Q 313.00>269.00 (-) 3.73e3



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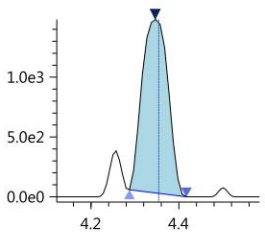
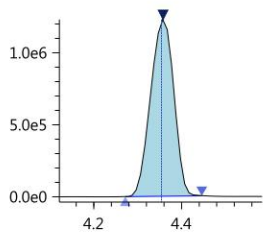
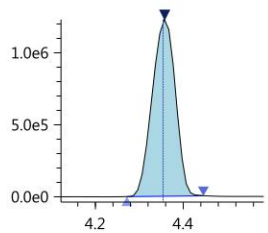
Conc 0.0065
RT 4.346 Area 6005
Q 362.90>319.00 (-) 1.48e3



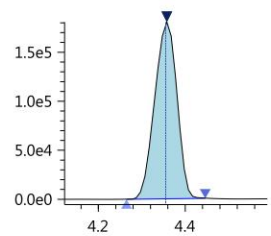
PFHpA-13C_IS
Conc 5.0000
RT 4.358 Area 4535315
ISTD 366.90>322.10 (-) 1.23e6



PFHpA-13C
Conc 4.1871
RT 4.358 Area 4535315
Q 366.90>322.10 (-) 1.23e6



PFHxS-18O_IS
Conc 5.0000
RT 4.358 Area 642066
ISTD 402.70>84.05 (-) 1.81e5



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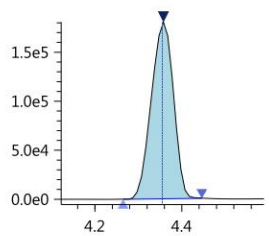
Conc 3.7506
RT 4.358 Area 642066
Q 402.70>84.05 (-) 1.81e5



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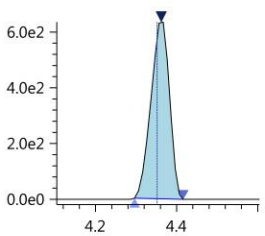
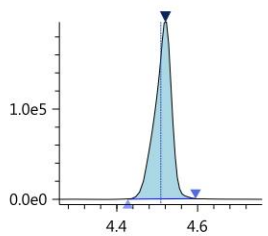
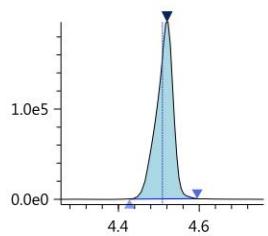
Conc 0.0153
RT 4.362 Area 2034
Q 399.00>80.00 (-) 6.36e2



6_2-FTS-13C
Conc 2.5528
RT 4.520 Area 558119
Q 428.90>409.00 (-) 1.96e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.520 Area 558119
ISTD 428.90>409.00 (-) 1.96e5



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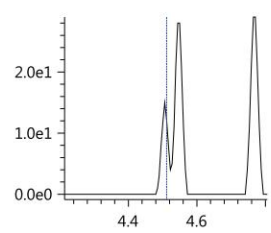
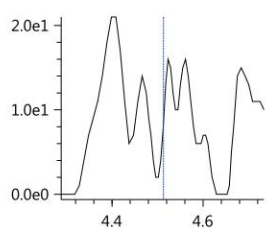
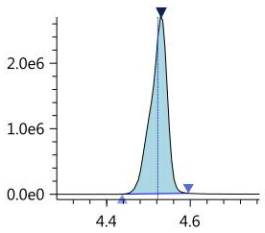
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 2.90e1



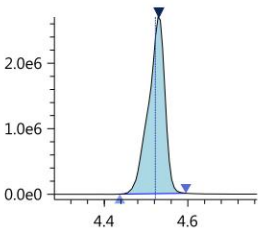
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 2.10e1



PFOA-13C_IS
Conc 5.0000
RT 4.530 Area 7360862
ISTD 416.80>372.05 (-) 2.71e6



PFOA-13C
Conc 4.2742
RT 4.530 Area 7360862
Q 416.80>372.05 (-) 2.71e6



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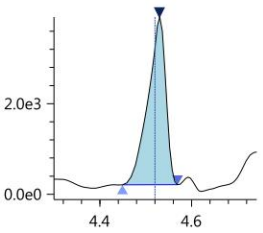
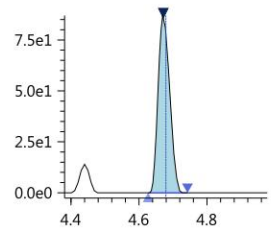
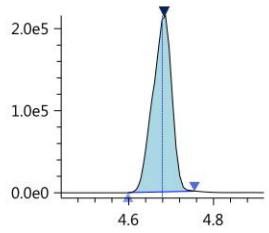
Conc 0.0090
RT 4.530 Area 9925
Q 413.00>369.00 (-) 3.91e3



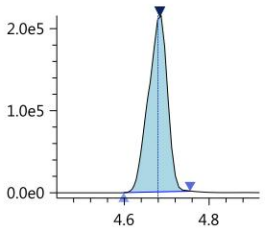
PFOS_1
Conc 0.0022
RT 4.672 Area 208
Q 499.00>80.00 (-) 8.70e1



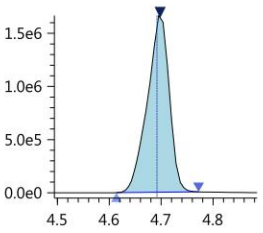
PFOS-13C_IS
Conc 5.0000
RT 4.684 Area 676438
ISTD 502.80>80.05 (-) 2.16e5



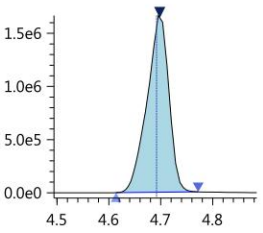
PFOS-13C
Conc 3.8820
RT 4.684 Area 676438
Q 502.80>80.05 (-) 2.16e5



PFNA-13C_IS
Conc 5.0000
RT 4.698 Area 4874079
ISTD 467.80>423.00 (-) 1.67e6



PFNA-13C
Conc 4.3399
RT 4.698 Area 4874079
Q 467.80>423.00 (-) 1.67e6



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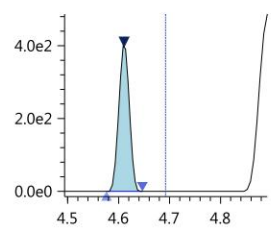
Conc -0.0039
RT 4.611 Area 586
Q 463.00>418.90 (-) 4.87e2



PFDA-13C_IS
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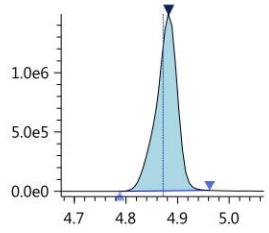
RT 4.883 Area 4196915
ISTD 514.80>469.95 (-) 1.49e6



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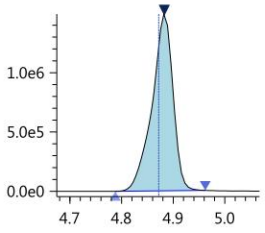
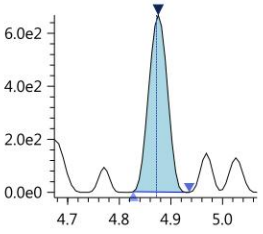
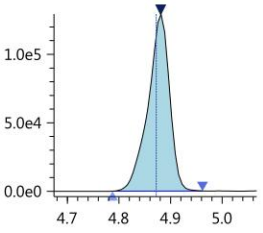
Q 514.80>469.95 (-) 1.49e6



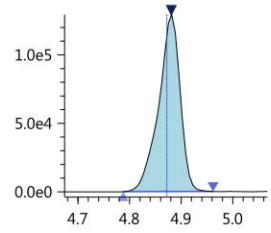
PFDA
Conc 0.0024
RT 4.875 Area 1690
Q 513.00>468.80 (-) 6.69e2



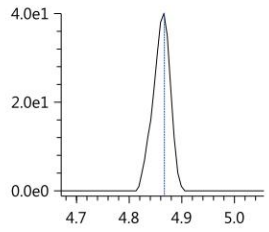
8_2-FTS-13C_IS
Conc 5.0000
RT 4.881 Area 372594
ISTD 528.80>509.00 (-) 1.29e5



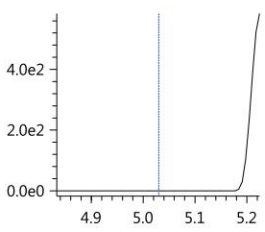
8_2-FTS-13C
Conc 2.5270
RT 4.881 Area 372594
Q 528.80>509.00 (-) 1.29e5



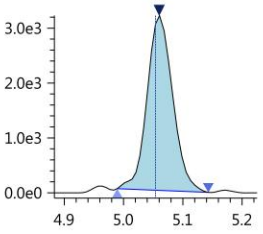
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 4.00e1



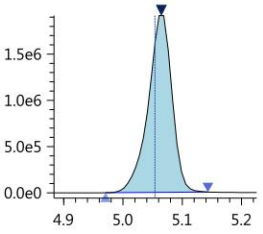
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 5.84e2



PFUnA
Conc 0.0083
RT 5.060 Area 9595
Q 563.00>518.90 (-) 3.23e3



PFUnA-13C_IS
Conc 5.0000
RT 5.065 Area 5364992
ISTD 564.80>519.95 (-) 1.92e6



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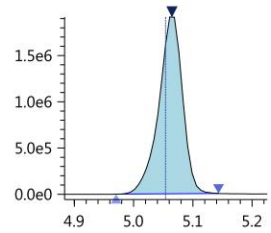
PFUnA-13C
Conc 4.5510
RT 5.065 Area 5364992
Q 564.80>519.95 (-) 1.92e6



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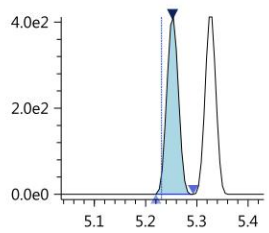
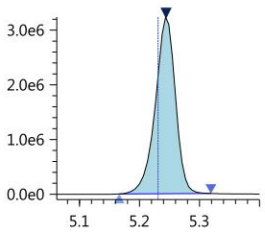
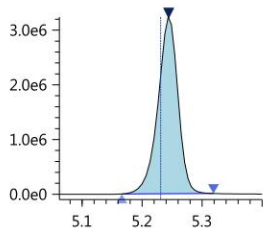
Conc 0.0076
RT 5.253 Area 661
Q 613.05>569.00 (-) 4.12e2



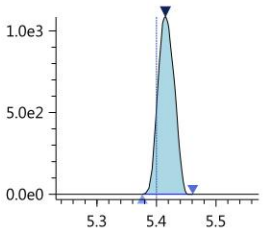
PFDoA-13C
Conc 4.4359
RT 5.244 Area 7524903
Q 614.80>569.95 (-) 3.24e6



PFDoA-13C_IS
Conc 5.0000
RT 5.244 Area 7524903
ISTD 614.80>569.95 (-) 3.24e6



PFTrDA
Conc 0.0015
RT 5.415 Area 2157
Q 663.00>618.90 (-) 1.09e3



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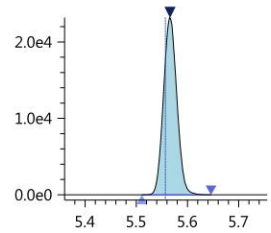
Conc -0.0017
RT 5.566 Area 42322
Q 713.40>669.00 (-) 2.32e4



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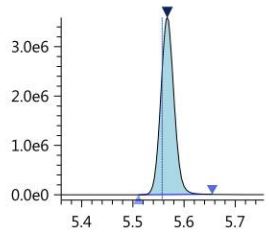
Conc 5.2266
RT 5.567 Area 6535498
Q 714.70>669.90 (-) 3.59e6



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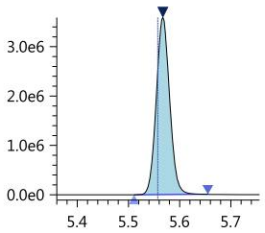
Conc 5.0000
RT 5.567 Area 6535498
ISTD 714.70>669.90 (-) 3.59e6



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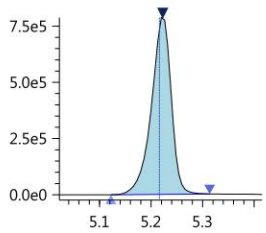
Conc 5.0000
RT 5.222 Area 2108832
ISTD 506.00>78.05 (-) 7.88e5



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Conc 5.1330
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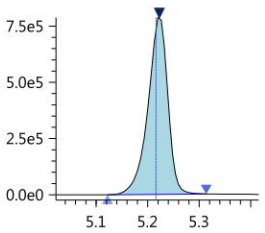
Q 506.00>78.05 (-) 7.88e5



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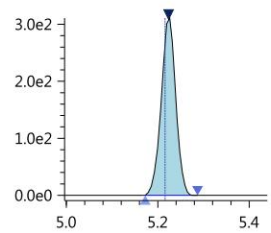
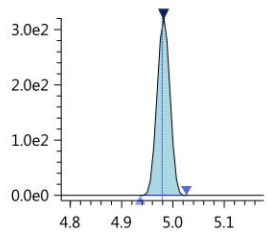
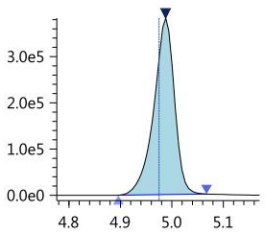
Conc 0.0010
RT 5.224 Area 691
Q 498.20>78.00 (-) 3.11e2



N-MeFOSAA
Conc 0.0050
RT 4.982 Area 568
Q 570.20>419.00 (-) 3.21e2



N-MeFOSAA-d3
Conc 7.5502
RT 4.988 Area 1062686
Q 572.80>419.05 (-) 3.83e5



N-MeFOSAA-d3_IS
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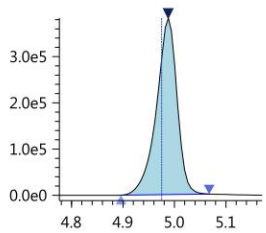
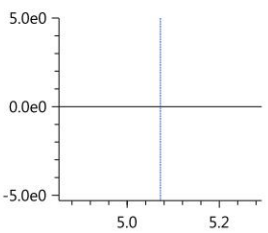
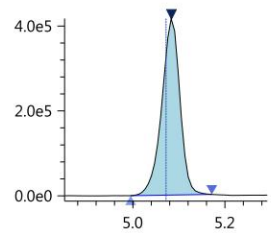
RT 4.988 Area 1062686
ISTD 572.80>419.05 (-) 3.83e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.084 Area 1142573
ISTD 588.80>419.00 (-) 4.18e5



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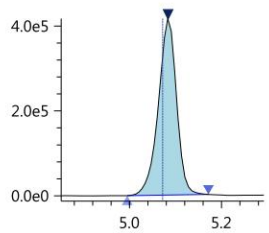
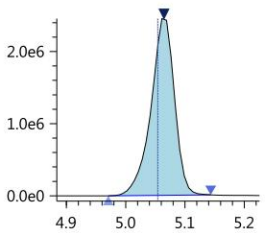
Conc 7.8162
RT 5.084 Area 1142573
Q 588.80>419.00 (-) 4.18e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.065 Area 6777908
ISTD 570.00>525.00 (-) 2.46e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_121
Lab ID: KQ1818747-04
RunType: MB
Matrix: Water

Date Acquired: 1/5/19 11:24
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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: _____

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Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_121	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:24	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818747-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/17/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	KQ1818747
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	20001

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.072	0.00	4798522	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.976	0.00	796329	4.1469	83	20 - 109	Y
18O2-PFHxS	4.367	0.00	569785	4.3008	86	26 - 122	Y
13C4-PFOS	4.691	0.00	644710	4.6626	93	25 - 121	Y
13C4-PFBA	3.314	-0.01	2624179	4.2619	85	27 - 124	Y
13C5-PFPeA	3.920	0.00	1678288	4.8912	98	27 - 138	Y
13C2-PFHxA	4.186	0.00	5076643	4.4307	89	28 - 132	Y
13C4-PFHpA	4.368	0.00	3884350	4.5192	90	19 - 139	Y
13C4-PFOA	4.536	0.00	4728921	4.1275	83	22 - 130	Y
13C5-PFNA	4.704	0.00	4226885	4.4340	89	20 - 127	Y
13C2-PFDA	4.889	0.00	3689611	4.4335	89	24 - 125	Y
13C2-PFUnDA	5.072	0.00	3290884	4.2263	85	22 - 125	Y
13C2-PFDoDA	5.253		4527912	4.0076	80	19 - 122	Y
13C2-PFTeDA	5.576		3407077	4.2144	84	13 - 124	Y
13C8-FOSA	5.229	+0.00	1368793	3.7205	74	18 - 109	Y
D3-MeFOSA	5.621	+0.00	426334	4.0723	81	15 - 153	Y
D5-EtFOSA	5.759	+0.00	699113	3.9825	80	25 - 107	Y
D7-MeFOSE	5.592	+0.00	612550	4.0278	81	24 - 112	Y
D9-EtFOSE	5.724	+0.00	660963	4.0270	81	19 - 109	Y
D3-MeFOSAA	4.995		583031	4.0041	80	9 - 123	Y
D5-EtFOSAA	5.092	0.00	598108	4.2786	86	12 - 126	Y
13C2-6:2 FTS	4.526	0.00	402560	3.3774	68	10 - 226	Y
13C2-8:2 FTS	4.887	0.00	385479	4.1585	83	10 - 202	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 CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_121	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:24	**Vial:**	3
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1818747-04	**Raw Units:**	ng/mL

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	-0.01	297	0.0018	0.058	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.361	-0.01	961	0.0088	0.28	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.671	-0.02	376	0.0040	0.13	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.919	0.00	79468	0.0142	0.45	U	Y
Perfluorohexanoic acid (PFHxA)	4.190	+0.00	9442	0.0084	0.27	U	Y
Perfluoroheptanoic acid (PFHpA)	4.369	+0.00	2582	0.0023	0.074	U	Y
Perfluorooctanoic acid (PFOA)	4.537		10366	0.0127	0.41	J	Y
Perfluorononanoic acid (PFNA)	4.705	0.00	2470	0.0074	0.24	U	Y
Perfluorodecanoic acid (PFDA)	4.894	+0.00	1817	0.0029	0.093	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.073		11476	0.0213	0.68	U	Y
Perfluorododecanoic acid (PFDoDA)	5.261	+0.01	1157	0.0120	0.38	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.421	0.00	2814	0.0026	0.083	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.576		25839	0.0122	0.39	U	Y
Perfluorooctane sulfonamide (FOSA)	5.227	0.00	963	0.0026	0.083	U	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.626	+0.00	1454	0.0129	0.41	U	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	0		0	0	0	U	Y
N-Methyl perfluorooctane sulfonamidoethanol	5.598		644	0.0036	0.12	U	Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.736	+0.00	747	0.0046	0.15	J	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.994	0.00	564	0.0092	0.29	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.531	+0.00	389	0.0052	0.17	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.887	0.00	144	0.0021	0.067	U	Y

Prep Amount:	250 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 1/18/2019 10:42:01 AM

010419_121

Sample ID: KQ1818747-04
Date acquired: 1/5/2019 11:24:27 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_121.lcd
Vial: 23 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.314	2624179	2624179	2	5.0000	ng/mL	----
PFBA-13C	M	3.314	2624179	4798522	26	4.2619	ng/mL	----
PFBA	ND(W/B)	----	----	2624179	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.920	1678288	1678288	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.920	1678288	4798522	26	4.8912	ng/mL	----
PFPeA	Auto	3.919	79468	1678288	4	0.0142	ng/mL	----
PFBS_1	M	3.970	297	796329	16	0.0018	ng/mL	----
PFBS-13C	Auto	3.976	796329	4798522	26	4.1469	ng/mL	----
PFBS-13C_IS	Auto	3.976	796329	796329	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.186	5076643	5076643	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.186	5076643	4798522	26	4.4307	ng/mL	----
PFHxA	M	4.190	9442	5076643	6	0.0084	ng/mL	----
PFHpA	Auto	4.369	2582	3884350	8	0.0023	ng/mL	----
PFHpA-13C_IS	Auto	4.368	3884350	3884350	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.368	3884350	4798522	26	4.5192	ng/mL	----
PFHxS-18O_IS	Auto	4.367	569785	569785	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.367	569785	4798522	26	4.3008	ng/mL	----
PFHxS_1	Auto	4.361	961	569785	7	0.0088	ng/mL	----
6_2-FTS-13C	Auto	4.526	402560	4798522	26	3.3774	ng/mL	----
6_2-FTS-13C_IS	Auto	4.526	402560	402560	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.531	389	402560	10	0.0052	ng/mL	----
PFHpS_1	ND(W/B)	----	----	569785	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.536	4728921	4728921	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.536	4728921	4798522	26	4.1275	ng/mL	----
PFOA	M	4.537	10366	4728921	9	0.0127	ng/mL	----
PFOS_1	Auto	4.671	376	644710	13	0.0040	ng/mL	----
PFOS-13C_IS	Auto	4.691	644710	644710	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.691	644710	4798522	26	4.6626	ng/mL	----
PFNA-13C_IS	Auto	4.704	4226885	4226885	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.704	4226885	4798522	26	4.4340	ng/mL	----
PFNA	Auto	4.705	2470	4226885	11	0.0074	ng/mL	----
PFDA-13C_IS	Auto	4.889	3689611	3689611	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.889	3689611	4798522	26	4.4335	ng/mL	----
PFDA	M	4.894	1817	3689611	12	0.0029	ng/mL	----
8_2-FTS-13C_IS	Auto	4.887	385479	385479	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.887	385479	4798522	26	4.1585	ng/mL	----
8_2-FTS_1	Auto	4.887	144	385479	15	0.0021	ng/mL	----
PFDS_1	ND(W/B)	----	----	644710	13	----	ng/mL	----
PFUnA	M	5.073	11476	3290884	14	0.0213	ng/mL	----
PFUnA-13C_IS	Auto	5.072	3290884	3290884	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.072	3290884	4798522	26	4.2263	ng/mL	----
PFDoA	Auto	5.261	1157	4527912	17	0.0120	ng/mL	----
PFDoA-13C	Auto	5.253	4527912	4798522	26	4.0076	ng/mL	----
PFDoA-13C_IS	Auto	5.253	4527912	4527912	17	5.0000	ng/mL	----
PFTrDA	Auto	5.421	2814	3407077	22	0.0026	ng/mL	----
PFTeDA	Auto	5.576	25839	3407077	22	0.0122	ng/mL	----
PFTeDA-13C	Auto	5.576	3407077	4798522	26	4.2144	ng/mL	----
PFTeDA-13C_IS	Auto	5.576	3407077	3407077	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.229	1368793	1368793	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.229	1368793	4798522	26	3.7205	ng/mL	----
FOSA	Auto	5.227	963	1368793	18	0.0026	ng/mL	----
N-MeFOSAA	Auto	4.994	564	583031	19	0.0092	ng/mL	----
N-MeFOSAA-d3	Auto	4.995	583031	4798522	26	4.0041	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.995	583031	583031	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.621	426334	426334	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.621	426334	4798522	26	4.0723	ng/mL	----
N-MeFOSA	Auto	5.626	1454	426334	1	0.0129	ng/mL	----
N-MeFOSE-d7	Auto	5.592	612550	4798522	26	4.0278	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.592	612550	612550	20	5.0000	ng/mL	----
N-MeFOSE	M	5.598	644	612550	20	0.0036	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	598108	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.092	598108	598108	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.092	598108	4798522	26	4.2786	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.759	699113	699113	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.759	699113	4798522	26	3.9825	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	699113	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.724	660963	660963	24	5.0000	ng/mL	----

Insight Report

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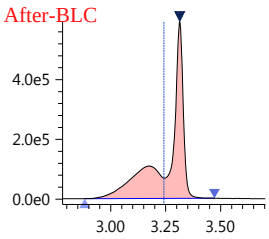
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.724	660963	4798522	26	4.0270	ng/mL	----
N-EtFOSE	M	5.736	747	660963	24	0.0046	ng/mL	----
13C7-PFUnDA_IS	Auto	5.072	4798522	4798522	26	5.0000	ng/mL	----

PFBA-13C_IS
Conc 5.0000
RT 3.314 Area 2624179
ISTD 216.90>172.15 (-) 5.93e5



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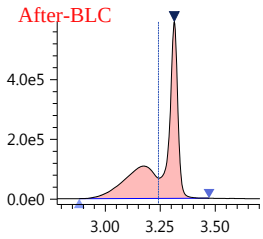
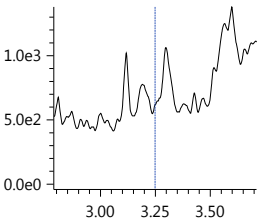
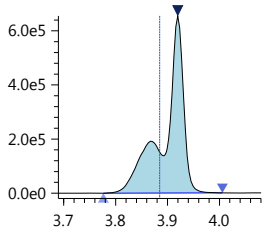
Conc 4.2619
RT 3.314 Area 2624179
Q 216.90>172.15 (-) 5.93e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.38e3



PFPeA-13C_IS
Conc 5.0000
RT 3.920 Area 1678288
ISTD 267.90>223.00 (-) 6.55e5



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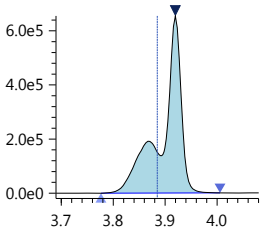
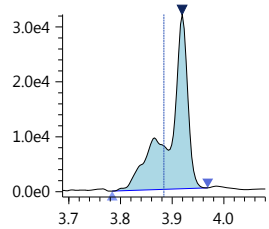
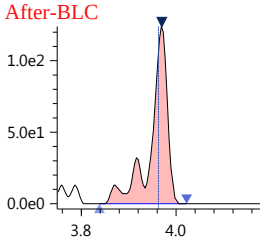
Q 267.90>223.00 (-) 6.55e5



PFPeA
Conc 0.0142
RT 3.919 Area 79468
Q 263.05>219.10 (-) 3.23e4



PFBS_1
Conc 0.0018
RT 3.970 Area 297
Q 299.00>80.00 (-) 1.24e2



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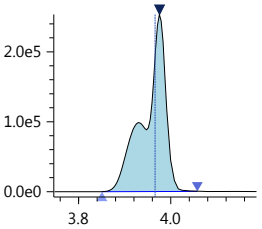
Q 301.80>80.00 (-) 2.53e5



PFBS-13C_IS
Conc 5.0000
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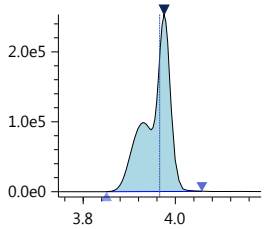
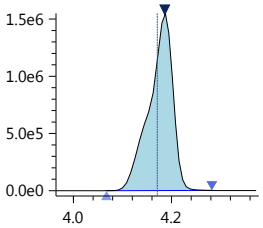
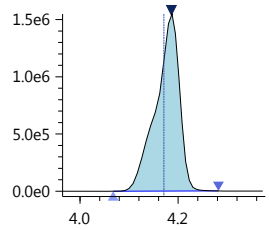
ISTD 301.80>80.00 (-) 2.53e5



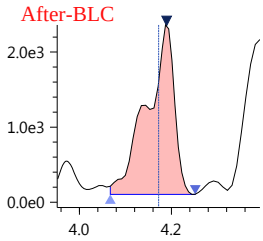
PFHxA-13C_IS
Conc 5.0000
RT 4.186 Area 5076643
ISTD 314.90>270.10 (-) 1.55e6



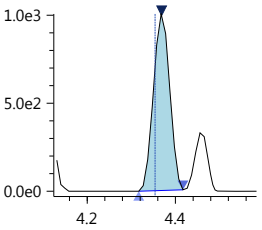
PFHxA-13C
Conc 4.4307
RT 4.186 Area 5076643
Q 314.90>270.10 (-) 1.55e6



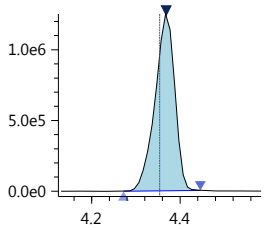
PFHxA
Conc 0.0084
RT 4.190 Area 9442
Q 313.00>269.00 (-) 2.36e3



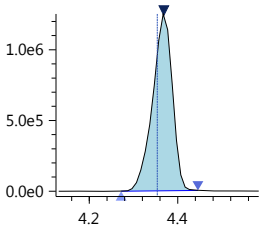
PFHpA
Conc 0.0023
RT 4.369 Area 2582
Q 362.90>319.00 (-) 1.01e3



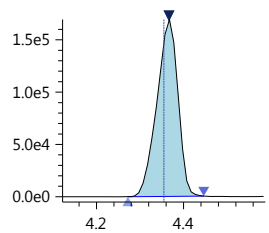
PFHpA-13C_IS
Conc 5.0000
RT 4.368 Area 3884350
ISTD 366.90>322.10 (-) 1.25e6



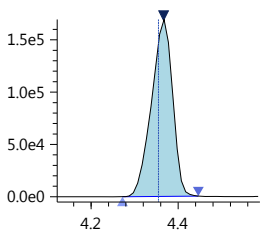
PFHpA-13C
Conc 4.5192
RT 4.368 Area 3884350
Q 366.90>322.10 (-) 1.25e6



PFHxS-18O_IS
Conc 5.0000
RT 4.367 Area 569785
ISTD 402.70>84.05 (-) 1.69e5



PFHxS-18O
Conc 4.3008
RT 4.367 Area 569785
Q 402.70>84.05 (-) 1.69e5



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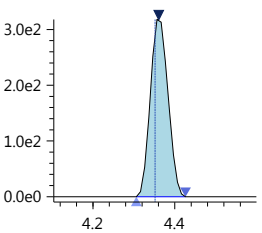
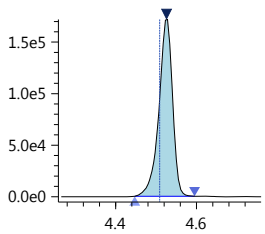
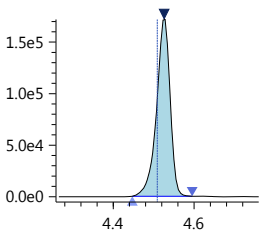
Conc 0.0088
RT 4.361 Area 961
Q 399.00>80.00 (-) 3.18e2



6_2-FTS-13C
Conc 3.3774
RT 4.526 Area 402560
Q 428.90>409.00 (-) 1.72e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.526 Area 402560
ISTD 428.90>409.00 (-) 1.72e5



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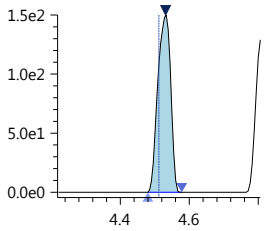
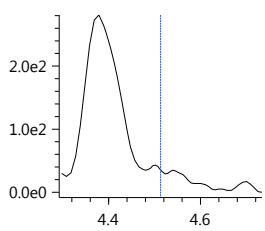
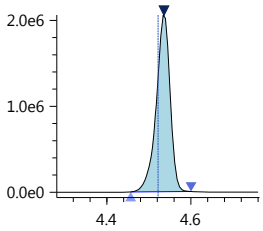
6_2-FTS_1
Conc 0.0052
RT 4.531 Area 389
Q 427.00>407.00 (-) 1.50e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 2.81e2



PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 4728921
ISTD 416.80>372.05 (-) 2.06e6



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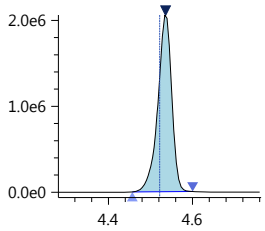
Conc 4.1275
RT 4.536 Area 4728921
Q 416.80>372.05 (-) 2.06e6



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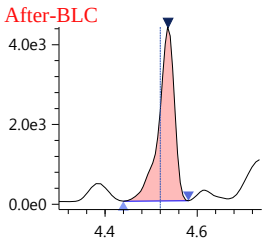
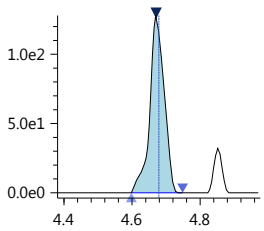
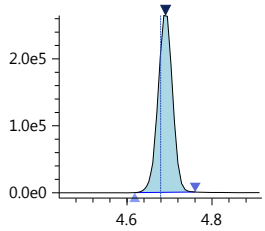
Conc 0.0127
RT 4.537 Area 10366
Q 413.00>369.00 (-) 4.44e3



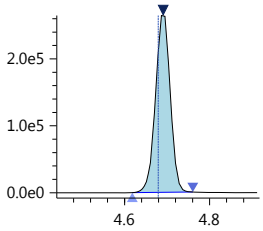
PFOS_1
Conc 0.0040
RT 4.671 Area 376
Q 499.00>80.00 (-) 1.28e2



PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 644710
ISTD 502.80>80.05 (-) 2.65e5



PFOS-13C
Conc 4.6626
RT 4.691 Area 644710
Q 502.80>80.05 (-) 2.65e5



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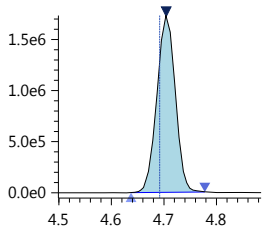
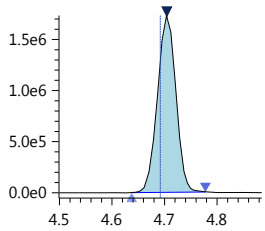
Conc 5.0000
RT 4.704 Area 4226885
ISTD 467.80>423.00 (-) 1.73e6



PFNA-13C
Conc 4.4340
RT 4.704 Area 4226885
Q 467.80>423.00 (-) 1.73e6



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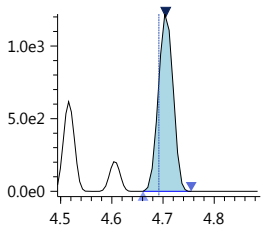
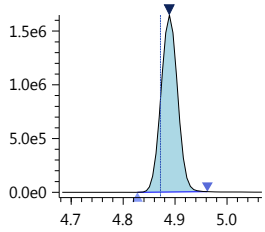
Conc 0.0074
RT 4.705 Area 2470
Q 463.00>418.90 (-) 1.22e3



PFDA-13C_IS
Conc 5.0000
RT 4.889 Area 3689611
ISTD 514.80>469.95 (-) 1.65e6



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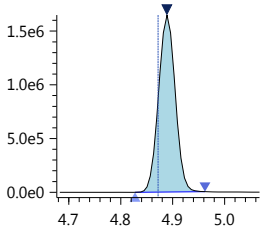
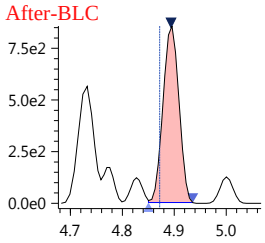
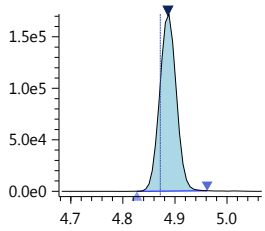
RT 4.889 Area 3689611
Q 514.80>469.95 (-) 1.65e6



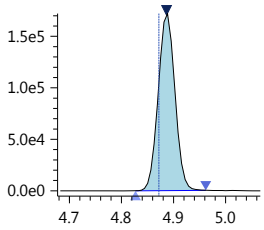
PFDA
Conc 0.0029
RT 4.894 Area 1817
Q 513.00>468.80 (-) 8.58e2



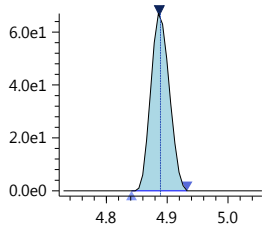
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 385479
ISTD 528.80>509.00 (-) 1.72e5



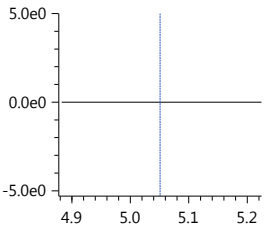
8_2-FTS-13C
Conc 4.1585
RT 4.887 Area 385479
Q 528.80>509.00 (-) 1.72e5



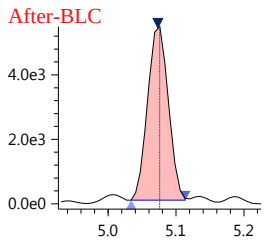
8_2-FTS_1
Conc 0.0021
RT 4.887 Area 144
Q 527.10>506.90 (-) 6.70e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0213
RT 5.073 Area 11476
Q 563.00>518.90 (-) 5.50e3



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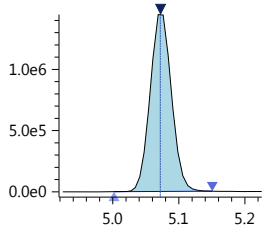
Conc 5.0000
RT 5.072 Area 3290884
ISTD 564.80>519.95 (-) 1.45e6



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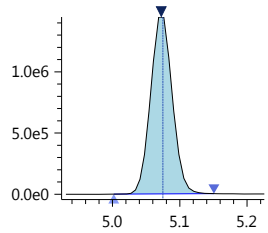
PFUnA-13C
Conc 4.2263
RT 5.072 Area 3290884
Q 564.80>519.95 (-) 1.45e6



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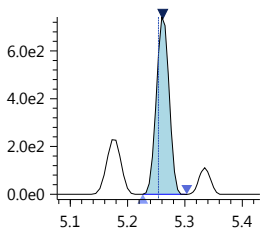
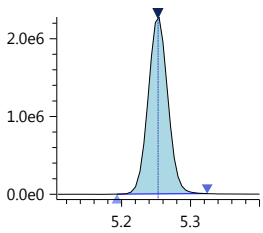
Conc 0.0120
RT 5.261 Area 1157
Q 613.05>569.00 (-) 7.42e2



PFDoA-13C
Conc 4.0076
RT 5.253 Area 4527912
Q 614.80>569.95 (-) 2.28e6



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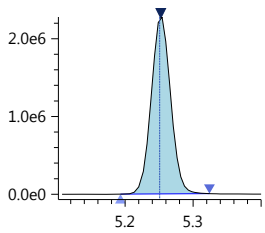
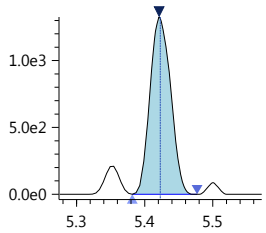
Conc 5.0000
RT 5.253 Area 4527912
ISTD 614.80>569.95 (-) 2.28e6



PFTrDA
Conc 0.0026
RT 5.421 Area 2814
Q 663.00>618.90 (-) 1.33e3



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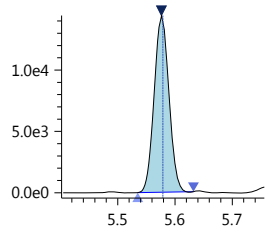
RT 5.576 Area 25839
Q 713.40>669.00 (-) 1.44e4



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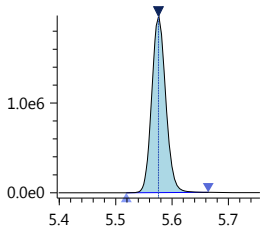
Conc 4.2144
RT 5.576 Area 3407077
Q 714.70>669.90 (-) 1.98e6



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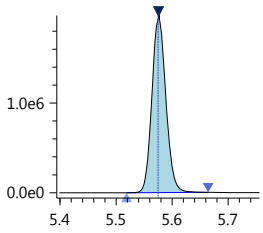
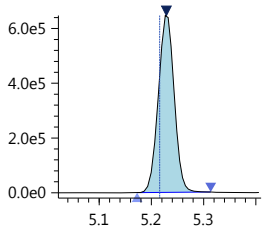
Conc 5.0000
RT 5.576 Area 3407077
ISTD 714.70>669.90 (-) 1.98e6



FOSA-13C_IS
Conc 5.0000
RT 5.229 Area 1368793
ISTD 506.00>78.05 (-) 6.48e5



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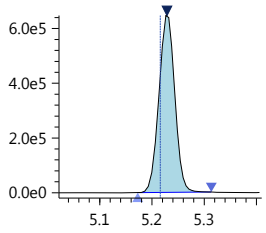
Q 506.00>78.05 (-) 6.48e5



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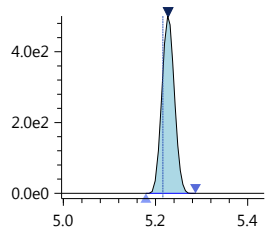
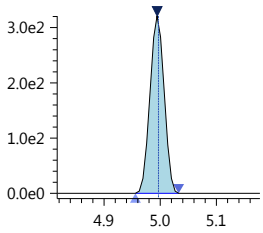
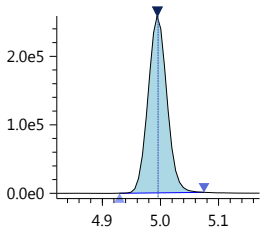
RT 5.227 Area 963
Q 498.20>78.00 (-) 5.01e2



N-MeFOSAA
Conc 0.0092
RT 4.994 Area 564
Q 570.20>419.00 (-) 3.21e2



N-MeFOSAA-d3
Conc 4.0041
RT 4.995 Area 583031
Q 572.80>419.05 (-) 2.59e5



N-MeFOSAA-d3_IS
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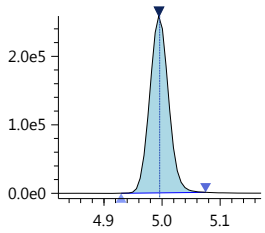
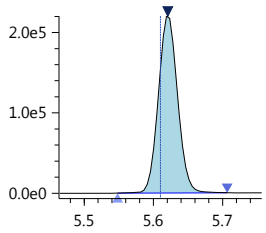
RT 4.995 Area 583031
ISTD 572.80>419.05 (-) 2.59e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.621 Area 426334
ISTD 514.90>168.90 (-) 2.21e5



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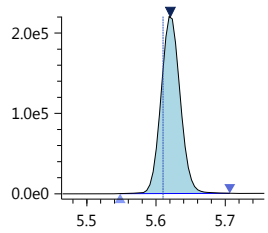
Q 514.90>168.90 (-) 2.21e5



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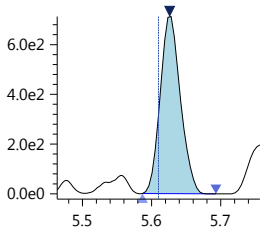
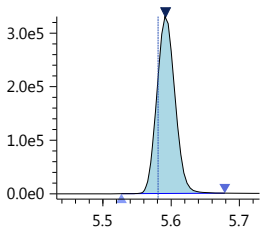
RT 5.626 Area 1454
Q 512.00>169.10 (-) 7.13e2



N-MeFOSE-d7
Conc 4.0278
RT 5.592 Area 612550
Q 622.70>59.10 (-) 3.31e5



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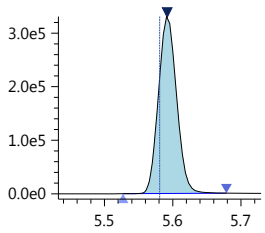
Conc 5.0000
RT 5.592 Area 612550
ISTD 622.70>59.10 (-) 3.31e5



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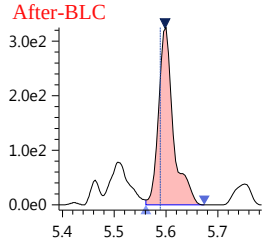
Conc 0.0036
RT 5.598 Area 644
Q 616.00>59.00 (-) 3.25e2



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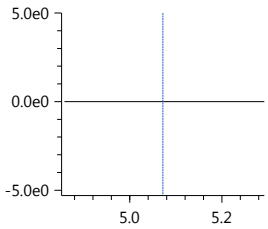
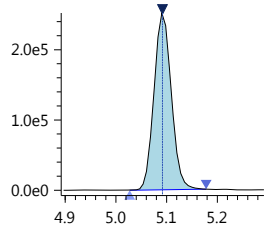
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 598108
ISTD 588.80>419.00 (-) 2.52e5



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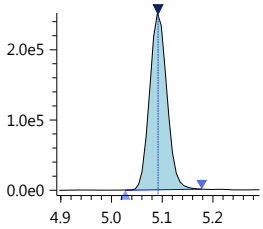
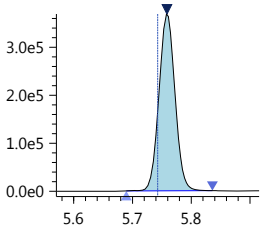
Conc 4.2786
RT 5.092 Area 598108
Q 588.80>419.00 (-) 2.52e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.759 Area 699113
ISTD 530.90>169.15 (-) 3.69e5



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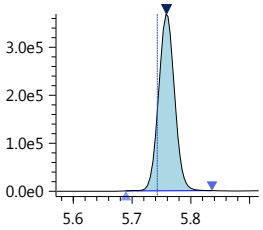
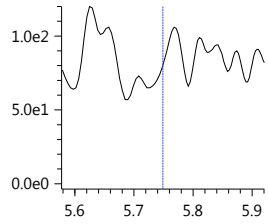
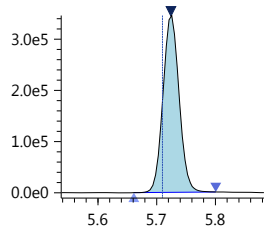
Conc 3.9825
RT 5.759 Area 699113
Q 530.90>169.15 (-) 3.69e5



N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.20e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 660963
ISTD 638.70>59.10 (-) 3.46e5



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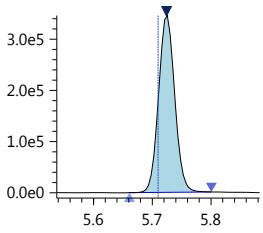
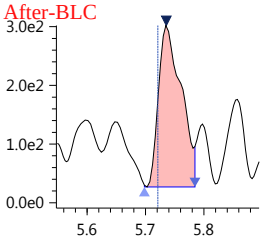
RT 5.724 Area 660963
Q 638.70>59.10 (-) 3.46e5

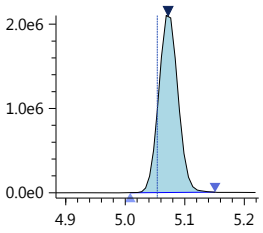


N-EtFOSE
Conc 0.0046
RT 5.736 Area 747
Q 630.00>58.90 (-) 3.02e2

After-BLC



13C7-PFUnDA_IS
Conc 5.0000
RT 5.072 Area 4798522
ISTD 570.00>525.00 (-) 2.10e6



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Printed at 1/18/2019 8:51:07 AM

010419_121

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Date acquired: 1/5/2019 11:24:27 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_121.lcd
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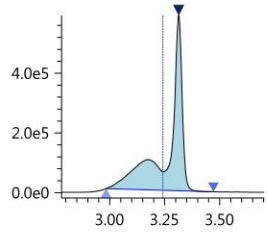
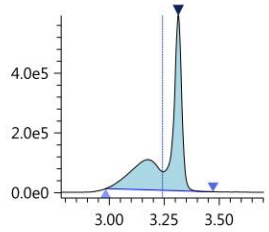
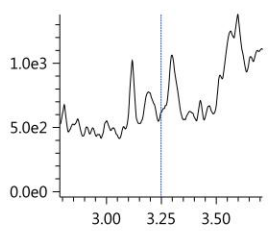
PFBA-13C_IS
Conc 5.0000
RT 3.314 Area 2429687
ISTD 216.90>172.15 (-) 5.93e5



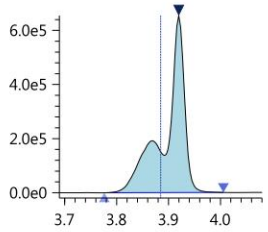
PFBA-13C
Conc 3.9460
RT 3.314 Area 2429687
Q 216.90>172.15 (-) 5.93e5



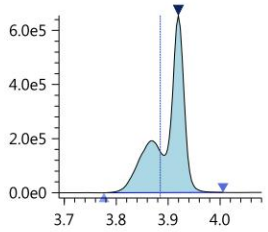
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.38e3



PFPeA-13C_IS
Conc 5.0000
RT 3.920 Area 1678288
ISTD 267.90>223.00 (-) 6.55e5



PFPeA-13C
Conc 4.8912
RT 3.920 Area 1678288
Q 267.90>223.00 (-) 6.55e5



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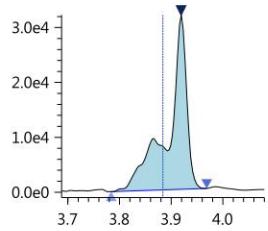
Conc 0.0142
RT 3.919 Area 79468
Q 263.05>219.10 (-) 3.23e4



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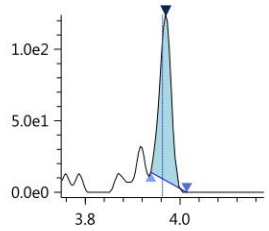
Conc 0.0012
RT 3.970 Area 196
Q 299.00>80.00 (-) 1.24e2



PFBS-13C
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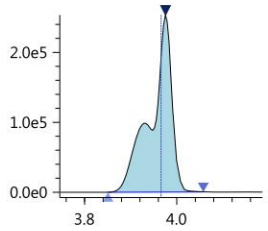
RT 3.976 Area 796329
Q 301.80>80.00 (-) 2.53e5



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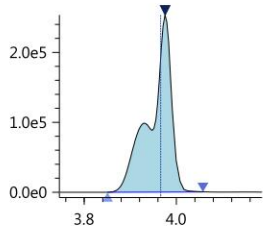
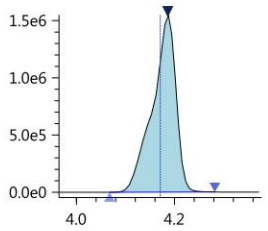


PFHxA-13C_IS
Conc 5.0000
RT 4.186 Area 5076643
ISTD 314.90>270.10 (-) 1.55e6



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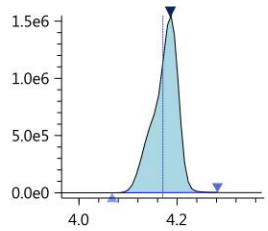
RT 4.186 Area 5076643
Q 314.90>270.10 (-) 1.55e6



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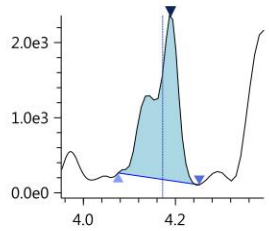
Conc 0.0074
RT 4.190 Area 8507
Q 313.00>269.00 (-) 2.36e3



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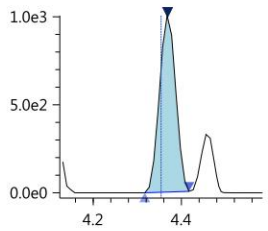
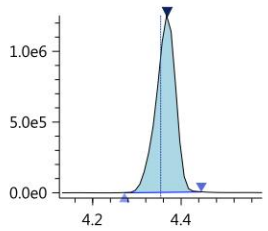
Conc 0.0023
RT 4.369 Area 2582
Q 362.90>319.00 (-) 1.01e3



PFHpA-13C_IS
Conc 5.0000
RT 4.368 Area 3884350
ISTD 366.90>322.10 (-) 1.25e6



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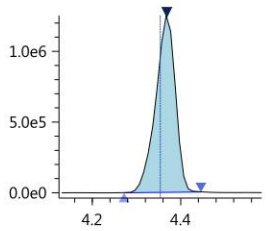
Conc 4.5192
RT 4.368 Area 3884350
Q 366.90>322.10 (-) 1.25e6



PFHxS-18O_IS
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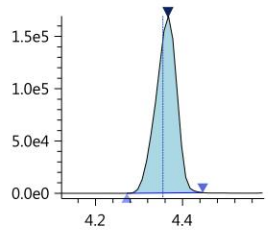
RT 4.367 Area 569785
ISTD 402.70>84.05 (-) 1.69e5



PFHxS-18O
Conc 4.3008
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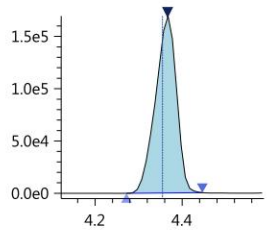
Q 402.70>84.05 (-) 1.69e5



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Conc 0.0088
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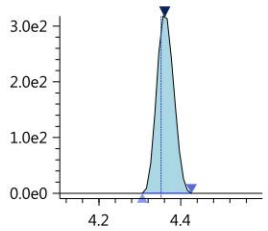
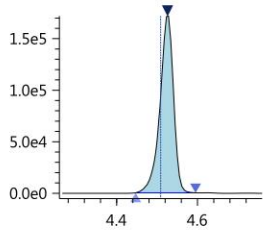
Q 399.00>80.00 (-) 3.18e2



6_2-FTS-13C
Conc 3.3774
RT 4.526 Area 402560
Q 428.90>409.00 (-) 1.72e5



6_2-FTS-13C_IS
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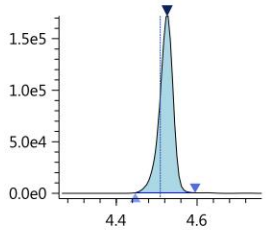
ISTD 428.90>409.00 (-) 1.72e5



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6_2-FTS_1
Conc 0.0052
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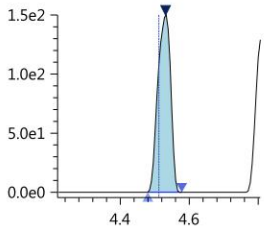
Q 427.00>407.00 (-) 1.50e2



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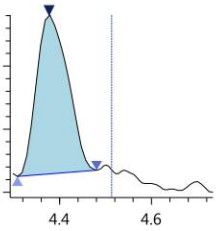
Q 449.00>80.15 (-) 2.81e2



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Conc 5.0000
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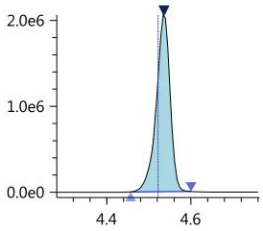
ISTD 416.80>372.05 (-) 2.06e6



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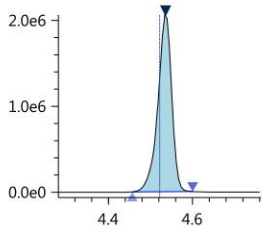
Q 416.80>372.05 (-) 2.06e6



PFOA
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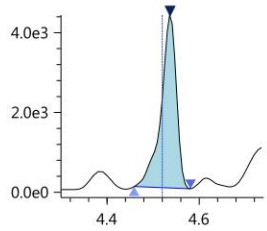
RT 4.537 Area 10092
Q 413.00>369.00 (-) 4.44e3



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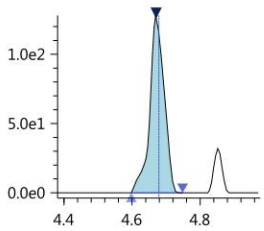
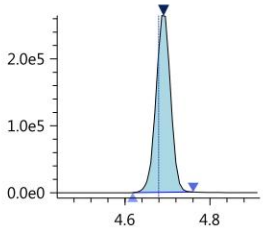
Conc 0.0040
RT 4.671 Area 376
Q 499.00>80.00 (-) 1.28e2



PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 644710
ISTD 502.80>80.05 (-) 2.65e5



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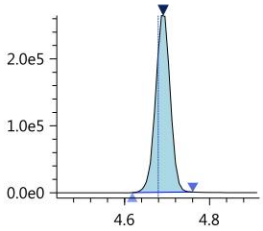

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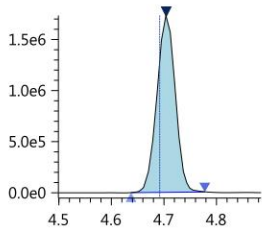
RT 4.704 Area 4226885
ISTD 467.80>423.00 (-) 1.73e6



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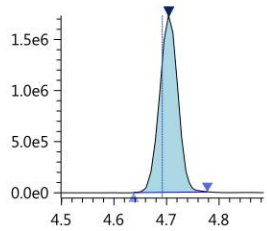
Q 467.80>423.00 (-) 1.73e6



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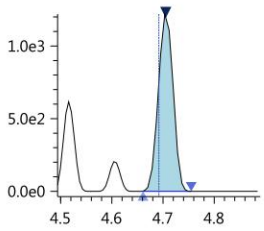
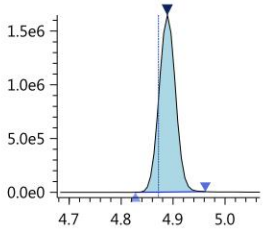
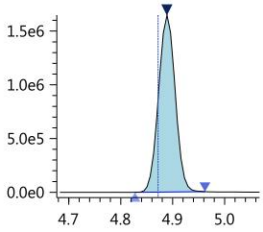
RT 4.705 Area 2470
Q 463.00>418.90 (-) 1.22e3



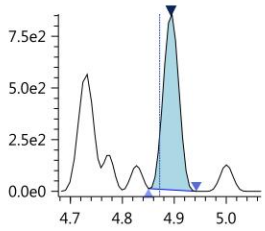
PFDA-13C_IS
Conc 5.0000
RT 4.889 Area 3689611
ISTD 514.80>469.95 (-) 1.65e6



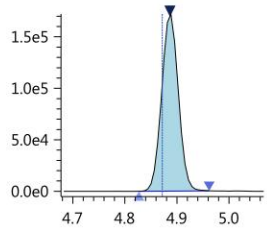
PFDA-13C
Conc 4.4335
RT 4.889 Area 3689611
Q 514.80>469.95 (-) 1.65e6



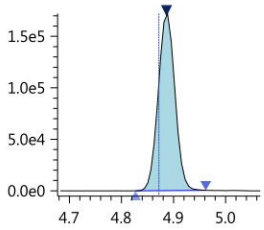
PFDA
Conc 0.0029
RT 4.894 Area 1803
Q 513.00>468.80 (-) 8.58e2



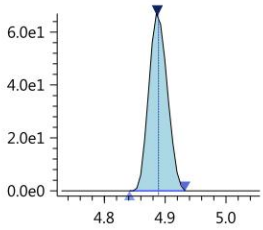
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 385479
ISTD 528.80>509.00 (-) 1.72e5



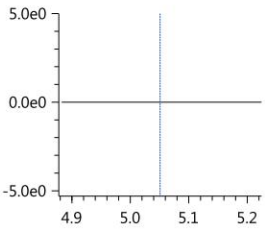
8_2-FTS-13C
Conc 4.1585
RT 4.887 Area 385479
Q 528.80>509.00 (-) 1.72e5



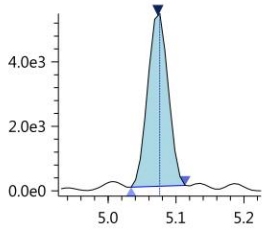
8_2-FTS_1
Conc 0.0021
RT 4.887 Area 144
Q 527.10>506.90 (-) 6.70e1



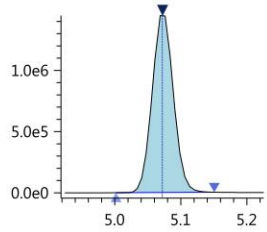
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0210
RT 5.073 Area 11340
Q 563.00>518.90 (-) 5.50e3



PFUnA-13C_IS
Conc 5.0000
RT 5.072 Area 3290884
ISTD 564.80>519.95 (-) 1.45e6



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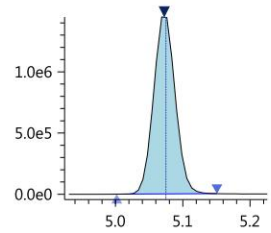
PFUnA-13C
Conc 4.2263
RT 5.072 Area 3290884
Q 564.80>519.95 (-) 1.45e6



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Conc 0.0120
RT 5.261 Area 1157
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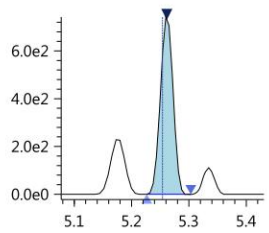
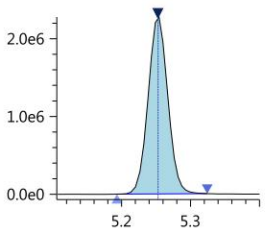
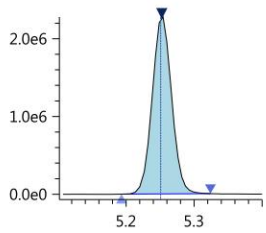


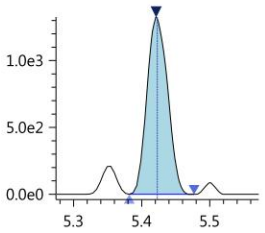
PFDoA-13C
Conc 4.0076
RT 5.253 Area 4527912
Q 614.80>569.95 (-) 2.28e6



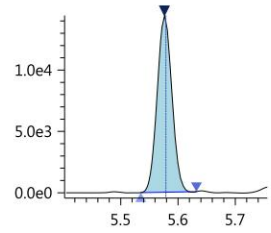
PFDoA-13C_IS
Conc 5.0000
RT 5.253 Area 4527912
ISTD 614.80>569.95 (-) 2.28e6



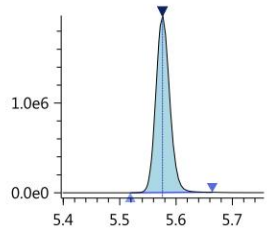
PFTrDA
Conc 0.0026
RT 5.421 Area 2814
Q 663.00>618.90 (-) 1.33e3



PFTeDA
Conc 0.0122
RT 5.576 Area 25839
Q 713.40>669.00 (-) 1.44e4



PFTeDA-13C
Conc 4.2144
RT 5.576 Area 3407077
Q 714.70>669.90 (-) 1.98e6



PFTeDA-13C_IS
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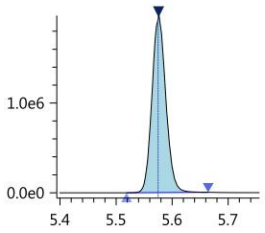
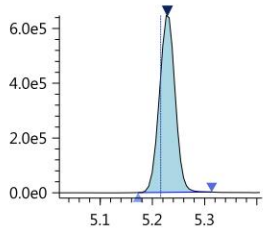
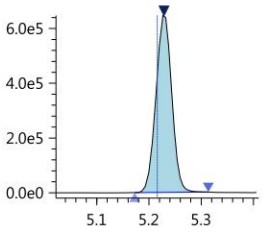
ISTD 714.70>669.90 (-) 1.98e6



FOSA-13C_IS
Conc 5.0000
RT 5.229 Area 1368793
ISTD 506.00>78.05 (-) 6.48e5



FOSA-13C
Conc 3.7205
RT 5.229 Area 1368793
Q 506.00>78.05 (-) 6.48e5



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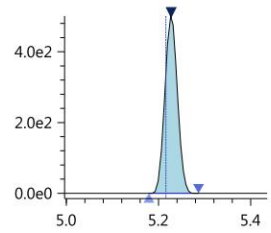
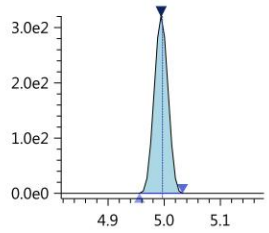
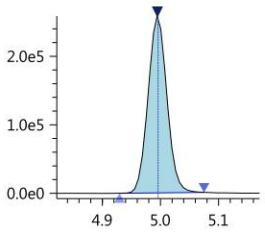
RT 5.227 Area 963
Q 498.20>78.00 (-) 5.01e2



N-MeFOSAA
Conc 0.0092
RT 4.994 Area 564
Q 570.20>419.00 (-) 3.21e2



N-MeFOSAA-d3
Conc 4.0041
RT 4.995 Area 583031
Q 572.80>419.05 (-) 2.59e5



N-MeFOSAA-d3_IS
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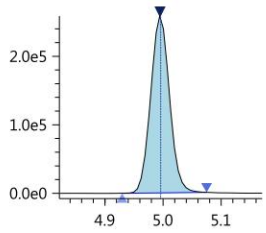
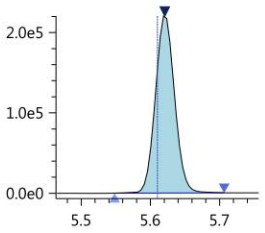
RT 4.995 Area 583031
ISTD 572.80>419.05 (-) 2.59e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.621 Area 426334
ISTD 514.90>168.90 (-) 2.21e5



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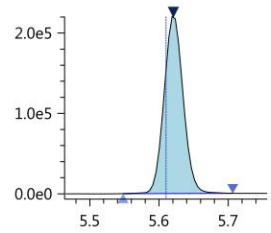
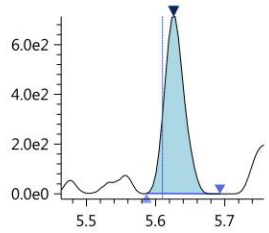
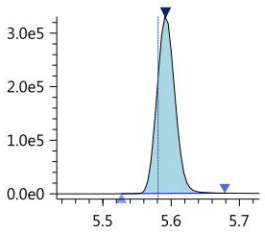
Conc 4.0723
RT 5.621 Area 426334
Q 514.90>168.90 (-) 2.21e5



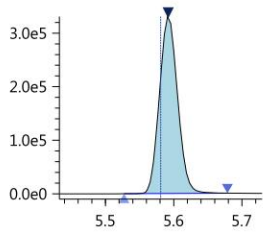
N-MeFOSA
Conc 0.0129
RT 5.626 Area 1454
Q 512.00>169.10 (-) 7.13e2



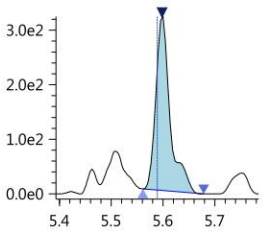
N-MeFOSE-d7
Conc 4.0278
RT 5.592 Area 612550
Q 622.70>59.10 (-) 3.31e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 612550
ISTD 622.70>59.10 (-) 3.31e5



N-MeFOSE
Conc 0.0034
RT 5.598 Area 613
Q 616.00>59.00 (-) 3.25e2



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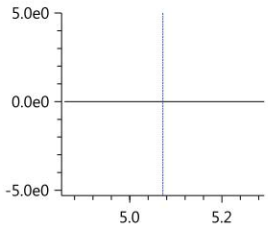
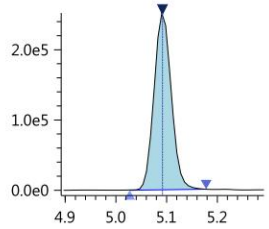
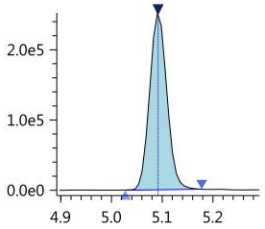
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



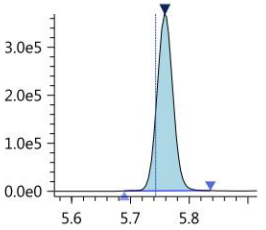
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 598108
ISTD 588.80>419.00 (-) 2.52e5



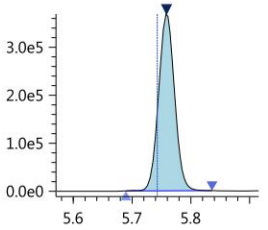
N-EtFOSAA-d5
Conc 4.2786
RT 5.092 Area 598108
Q 588.80>419.00 (-) 2.52e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.759 Area 699113
ISTD 530.90>169.15 (-) 3.69e5



N-EtFOSA-d9
Conc 3.9825
RT 5.759 Area 699113
Q 530.90>169.15 (-) 3.69e5



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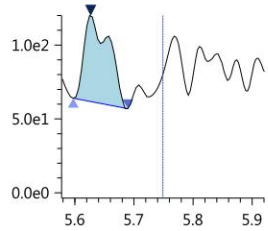
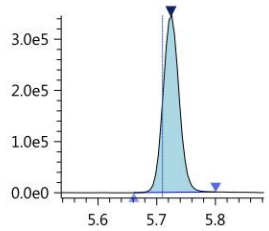
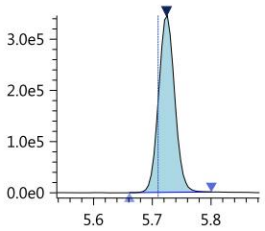
Conc 0.0069
RT 5.627 Area 172
Q 526.90>169.10 (-) 1.20e2



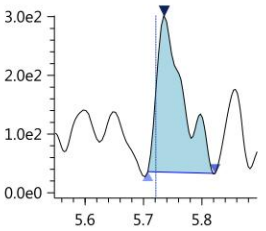
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 660963
ISTD 638.70>59.10 (-) 3.46e5



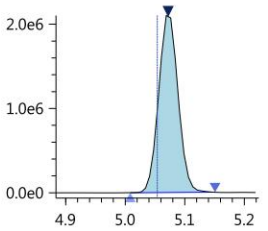
N-EtFOSE-d9
Conc 4.0270
RT 5.724 Area 660963
Q 638.70>59.10 (-) 3.46e5



N-EtFOSE
Conc 0.0052
RT 5.736 Area 840
Q 630.00>58.90 (-) 3.02e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.072 Area 4798522
ISTD 570.00>525.00 (-) 2.10e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_049
Lab ID: KQ1818316-05
RunType: LCS
Matrix: Soil

Date Acquired: 12/21/18 03:29
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	13C2-6:2 FTS	58	70	130	Native ok
	D5-EtFOSAA	184	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D3-MeFOSAA	174	70	130	Native ok
Surrogates	D3-MeFOSAA	158	20	154	Native ok
	D5-EtFOSAA	161	29	153	Native ok

Primary Review: _____

Printed: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_049	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:29	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818316-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**	328407	**Report Group:**	KQ1818316
Analysis	PFC/537M	**Prep Method:**	EPA 3550B		
		Prep Date:	12/17/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.058	0.00	6471741	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.965	0.00	1096954	4.0186	80		33 - 109	Y
18O2-PFHxS	4.354	0.00	639671	3.9134	78		36 - 120	Y
13C4-PFOS	4.677	-0.01	647182	3.8898	78		32 - 130	Y
13C4-PFBA	3.295	-0.02	3588013	4.4550	89		34 - 116	Y
13C5-PFPeA	3.909	-0.01	2154726	5.3393	107		39 - 133	Y
13C2-PFHxA	4.173	-0.01	6440072	4.5399	91		32 - 136	Y
13C4-PFHpA	4.356	0.00	5438615	5.2586	105		36 - 133	Y
13C4-PFOA	4.524	0.00	6970230	4.2389	85		31 - 134	Y
13C5-PFNA	4.692	0.00	4261475	3.9739	79		27 - 133	Y
13C2-PFDA	4.876	0.00	4178701	4.2451	85		30 - 137	Y
13C2-PFUnDA	5.058	0.00	4880032	4.3355	87		32 - 146	Y
13C2-PFDoDA	5.238	0.00	6957023	4.2952	86		36 - 136	Y
13C2-PFTeDA	5.561	0.00	6428608	5.3843	108		39 - 138	Y
13C8-FOSA	5.216	+0.00	1995554	5.0870	102		40 - 132	Y
D3-MeFOSAA	4.981	0.00	1063080	7.9103	158	*	20 - 154	Y
D5-EtFOSAA	5.077	0.00	1120358	8.0268	161	*	29 - 153	Y
13C2-6:2 FTS	4.514	0.00	552438	2.6464	53		30 - 140	Y
13C2-8:2 FTS	4.873	-0.01	374036	2.6568	53		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.963	0.00	168429	0.8663	6.93		Y
Perfluorohexane sulfonic acid (PFHxS)	4.348	-0.01	115111	0.8665	6.93		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 CM 01/14/19

2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_049	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:29	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818316-05	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.515	0.00	135137	1.0645	8.52		Y
Perfluorooctane sulfonic acid (PFOS)	4.678	0.00	86469	0.9494	7.60		Y
Perfluorodecane sulfonic acid (PFDS)	5.035	0.00	148292	1.1212	8.97		Y
Perfluorobutanoic acid (PFBA)	3.296	-0.02	622397	1.0181	8.14		Y
Perfluoropentanoic acid (PFPeA)	3.910	0.00	1153469	0.8809	7.05		Y
Perfluorohexanoic acid (PFHxA)	4.173	0.00	1153818	0.9926	7.94		Y
Perfluoroheptanoic acid (PFHpA)	4.356	0.00	1289119	0.8756	7.00		Y
Perfluorooctanoic acid (PFOA)	4.524	0.00	1042552	0.9825	7.86		Y
Perfluorononanoic acid (PFNA)	4.692	0.00	727024	1.0309	8.25		Y
Perfluorodecanoic acid (PFDA)	4.876	0.00	684174	0.9738	7.79		Y
Perfluoroundecanoic acid (PFUnDA)	5.058	0.00	750385	0.9936	7.95		Y
Perfluorododecanoic acid (PFDoDA)	5.238	0.00	814419	1.0704	8.56		Y
Perfluorotridecanoic acid (PFTrDA)	5.406	0.00	1108877	0.8427	6.74		Y
Perfluorotetradecanoic acid (PFTeDA)	5.561	0.00	449770	0.9627	7.70		Y
Perfluorooctane sulfonamide (FOSA)	5.215		560439	0.8913	7.13		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.983	0.00	129133	1.1440	9.15		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.080	0.00	82063	0.9170	7.34		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.516	0.00	74709	0.8958	7.17		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.873	0.00	59665	0.8875	7.10		Y

Prep Amount:	1 g	**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 1/14/2019 12:39:49 PM

122018_049

Sample ID: KQ1818316-05
Date acquired: 12/21/2018 3:29:45 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_049.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.295	3585604	3585604	2	5.0000	ng/mL	----
PFBA-13C	M	3.295	3588013	6471741	26	4.4550	ng/mL	----
PFBA	M	3.296	622397	3585604	2	1.0181	ng/mL	----
PFPeA-13C_IS	Auto	3.909	2154726	2154726	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.909	2154726	6471741	26	5.3393	ng/mL	----
PFPeA	Auto	3.910	1153469	2154726	4	0.8809	ng/mL	----
PFBS_1	Auto	3.963	168429	1096954	16	0.8663	ng/mL	----
PFBS-13C	Auto	3.965	1096954	6471741	26	4.0186	ng/mL	----
PFBS-13C_IS	Auto	3.965	1096954	1096954	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.173	6440072	6440072	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.173	6440072	6471741	26	4.5399	ng/mL	----
PFHxA	Auto	4.173	1153818	6440072	6	0.9926	ng/mL	----
PFHpA	Auto	4.356	1289119	5438615	8	0.8756	ng/mL	----
PFHpA-13C_IS	Auto	4.356	5438615	5438615	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.356	5438615	6471741	26	5.2586	ng/mL	----
PFHxS-18O_IS	Auto	4.354	639671	639671	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.354	639671	6471741	26	3.9134	ng/mL	----
PFHxS_1	Auto	4.348	115111	639671	7	0.8665	ng/mL	----
6_2-FTS-13C	Auto	4.514	552438	6471741	26	2.6464	ng/mL	----
6_2-FTS-13C_IS	Auto	4.514	552438	552438	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.516	74709	552438	10	0.8958	ng/mL	----
PFHpS_1	Auto	4.515	135137	639671	7	1.0645	ng/mL	----
PFOA-13C_IS	Auto	4.524	6970230	6970230	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.524	6970230	6471741	26	4.2389	ng/mL	----
PFOA	Auto	4.524	1042552	6970230	9	0.9825	ng/mL	----
PFOS_1	Auto	4.678	86469	647182	13	0.9494	ng/mL	----
PFOS-13C_IS	Auto	4.677	647182	647182	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.677	647182	6471741	26	3.8898	ng/mL	----
PFNA-13C_IS	Auto	4.692	4261475	4261475	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.692	4261475	6471741	26	3.9739	ng/mL	----
PFNA	Auto	4.692	727024	4261475	11	1.0309	ng/mL	----
PFDA-13C_IS	Auto	4.876	4178701	4178701	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.876	4178701	6471741	26	4.2451	ng/mL	----
PFDA	Auto	4.876	684174	4178701	12	0.9738	ng/mL	----
8_2-FTS-13C_IS	Auto	4.873	374036	374036	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.873	374036	6471741	26	2.6568	ng/mL	----
8_2-FTS_1	Auto	4.873	59665	374036	15	0.8875	ng/mL	----
PFDS_1	Auto	5.035	148292	647182	13	1.1212	ng/mL	----
PFUnA	Auto	5.058	750385	4880032	14	0.9936	ng/mL	----
PFUnA-13C_IS	Auto	5.058	4880032	4880032	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.058	4880032	6471741	26	4.3355	ng/mL	----
PFDoA	Auto	5.238	814419	6957023	17	1.0704	ng/mL	----
PFDoA-13C	Auto	5.238	6957023	6471741	26	4.2952	ng/mL	----
PFDoA-13C_IS	Auto	5.238	6957023	6957023	17	5.0000	ng/mL	----
PFTrDA	Auto	5.406	1108877	6428608	22	0.8427	ng/mL	----
PFTeDA	Auto	5.561	449770	6428608	22	0.9627	ng/mL	----
PFTeDA-13C	Auto	5.561	6428608	6471741	26	5.3843	ng/mL	----
PFTeDA-13C_IS	Auto	5.561	6428608	6428608	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.216	1995554	1995554	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.216	1995554	6471741	26	5.0870	ng/mL	----
FOSA	Auto	5.215	560439	1995554	18	0.8913	ng/mL	----
N-MeFOSAA	M	4.983	129133	1063080	19	1.1440	ng/mL	----
N-MeFOSAA-d3	Auto	4.981	1063080	6471741	26	7.9103	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.981	1063080	1063080	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.080	82063	1120358	21	0.9170	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.077	1120358	1120358	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.077	1120358	6471741	26	8.0268	ng/mL	----
13C7-PFUnDA_IS	Auto	5.058	6471741	6471741	26	5.0000	ng/mL	----

Insight Report

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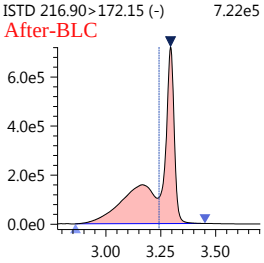
PFBA-13C_IS
Conc 5.0000
RT 3.295 Area 3585604
ISTD 216.90>172.15 (-) 7.22e5



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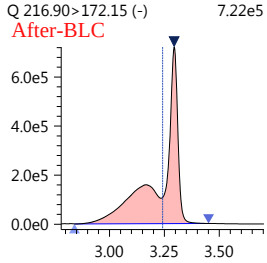
Conc 4.4550
RT 3.295 Area 3588013
Q 216.90>172.15 (-) 7.22e5



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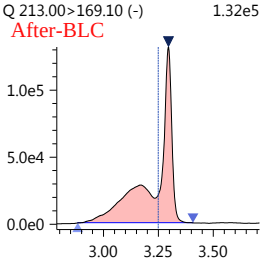
Conc 1.0181
RT 3.296 Area 622397
Q 213.00>169.10 (-) 1.32e5



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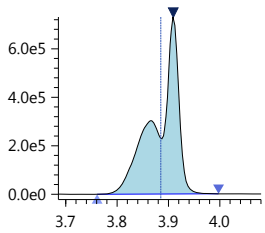

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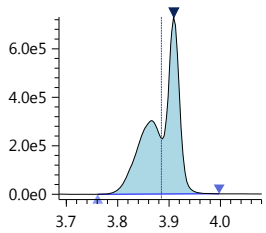
RT 3.909 Area 2154726
Q 267.90>223.00 (-) 7.31e5



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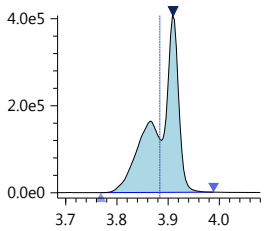

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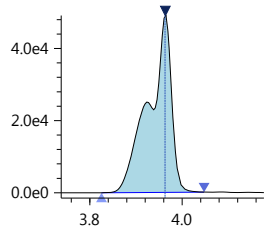
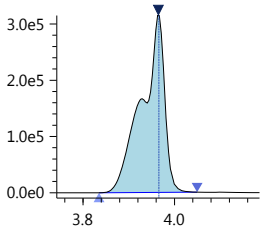
Conc 0.8663
RT 3.963 Area 168429
Q 299.00>80.00 (-) 4.91e4



PFBS-13C
Conc 4.0186
RT 3.965 Area 1096954
Q 301.80>80.00 (-) 3.15e5



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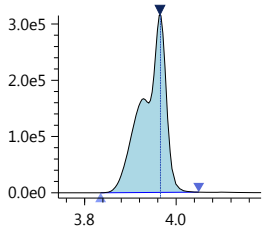
ISTD 301.80>80.00 (-) 3.15e5



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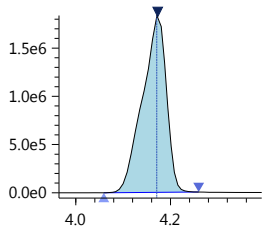

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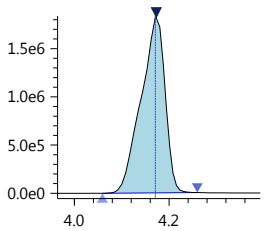
Q 314.90>270.10 (-) 1.84e6



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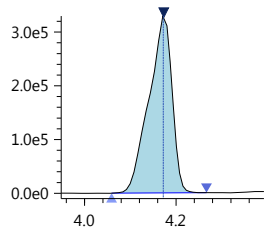

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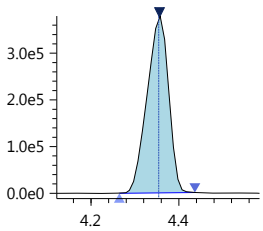

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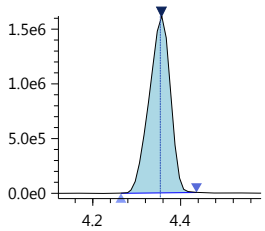
ISTD 366.90>322.10 (-) 1.62e6



PFHpA-13C
Conc 5.2586
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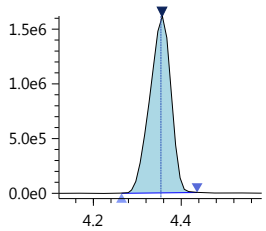

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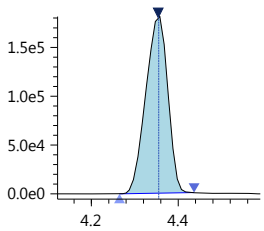
ISTD 402.70>84.05 (-) 1.82e5



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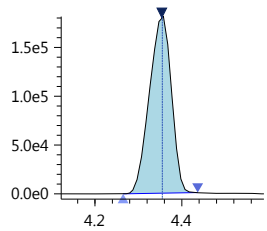

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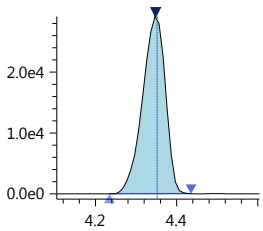

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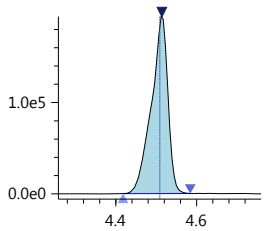
Conc 2.6464
RT 4.514 Area 552438
Q 428.90>409.00 (-) 1.94e5



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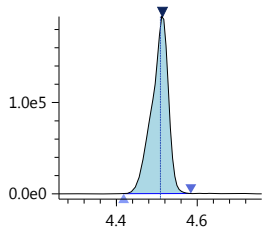

Insight Report

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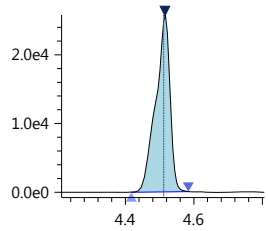
Q 427.00>407.00 (-) 2.58e4



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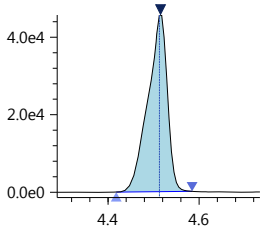
RT 4.515 Area 135137
Q 449.00>80.15 (-) 4.57e4



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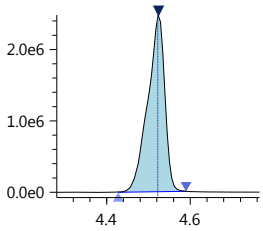

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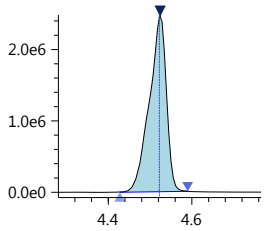
RT 4.524 Area 6970230
Q 416.80>372.05 (-) 2.48e6



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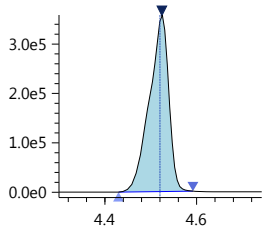
Conc 0.9825
RT 4.524 Area 1042552
Q 413.00>369.00 (-) 3.59e5



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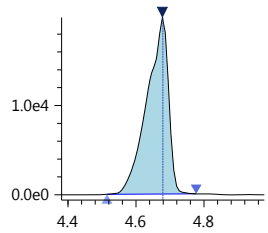
Conc 0.9494
RT 4.678 Area 86469
Q 499.00>80.00 (-) 1.99e4



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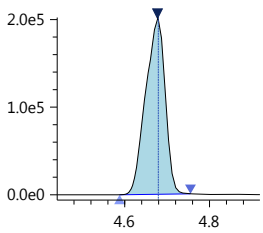
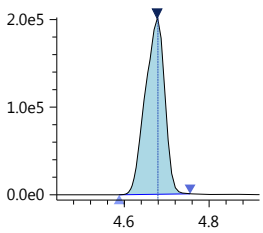
Conc 5.0000
RT 4.677 Area 647182
ISTD 502.80>80.05 (-) 2.02e5



PFOS-13C
Conc 3.8898
RT 4.677 Area 647182
Q 502.80>80.05 (-) 2.02e5



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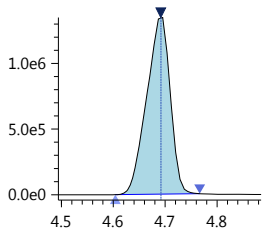
RT 4.692 Area 4261475
ISTD 467.80>423.00 (-) 1.35e6



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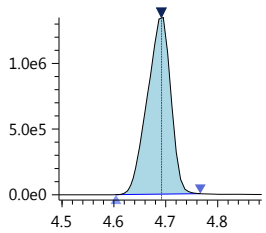

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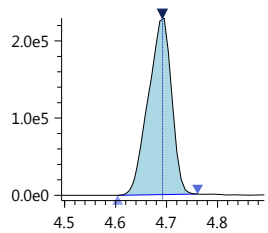
Conc 1.0309
RT 4.692 Area 727024
Q 463.00>418.90 (-) 2.30e5



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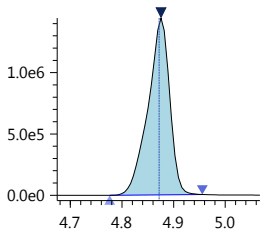

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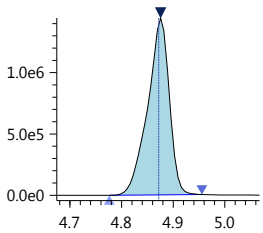

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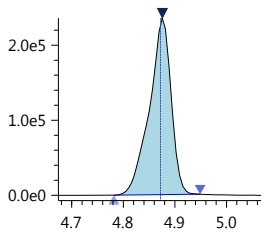

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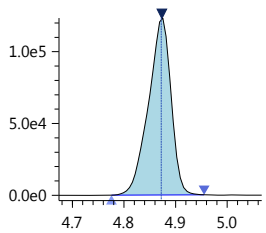
RT 4.873 Area 374036
ISTD 528.80>509.00 (-) 1.23e5



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RT 4.873 Area 374036
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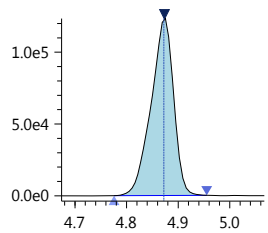

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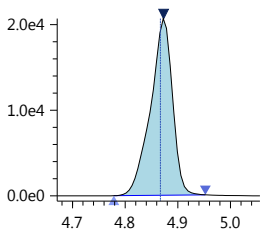
Q 527.10>506.90 (-) 2.07e4



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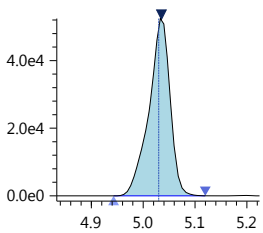
Q 599.00>79.90 (-) 5.24e4



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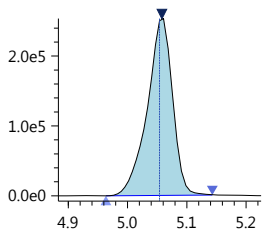

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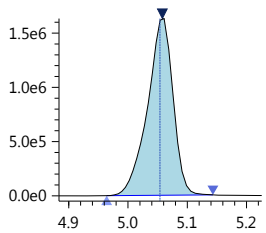

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Printed at 1/14/2019 12:39:49 PM

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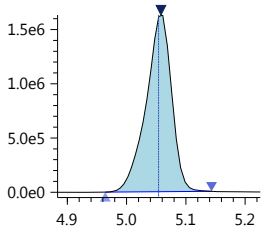
Q 564.80>519.95 (-) 1.63e6



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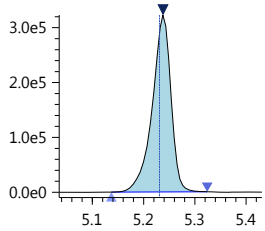

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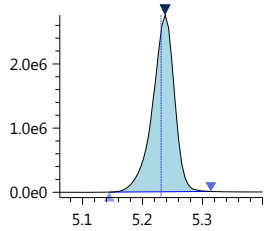
Q 614.80>569.95 (-) 2.76e6



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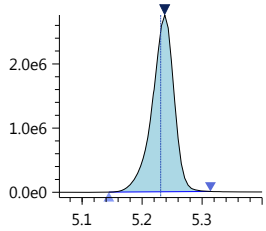

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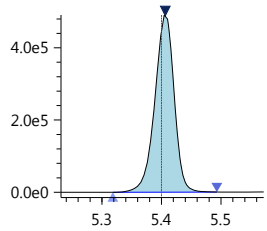

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RT 5.561 Area 449770
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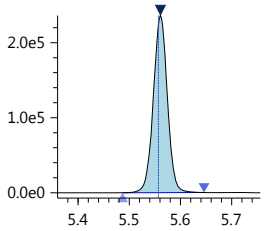

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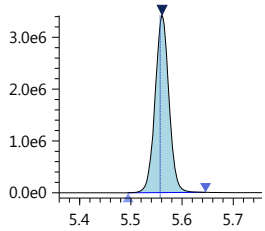

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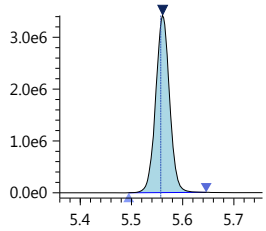

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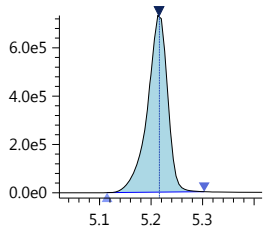

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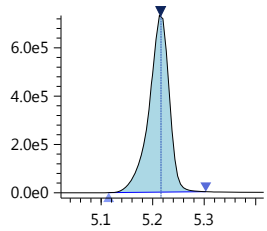

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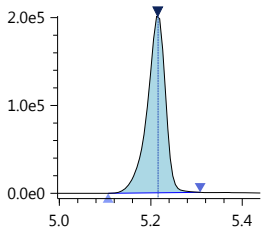

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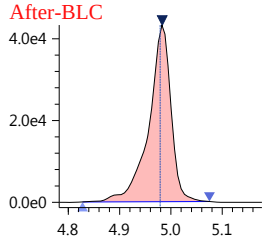
RT 4.983 Area 129133
Q 570.20>419.00 (-) 4.34e4

After-BLC



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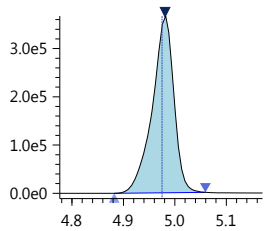
Conc 7.9103
RT 4.981 Area 1063080
Q 572.80>419.05 (-) 3.67e5



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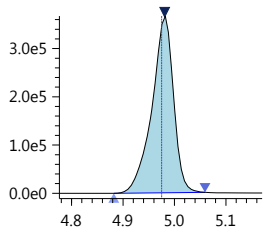

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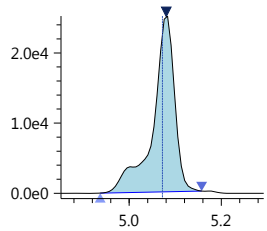

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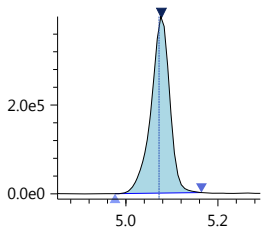

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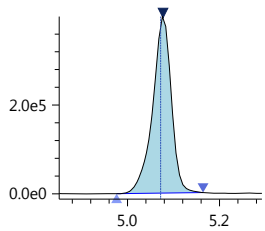

13C7-PFUnDA_IS
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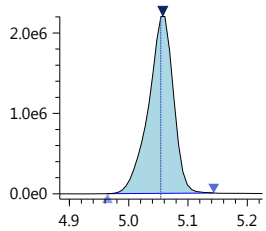
ISTD 570.00>525.00 (-) 2.20e6



Insight Report

Printed at 1/14/2019 11:23:27 AM

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Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_049.lcd
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PFBA-13C_IS
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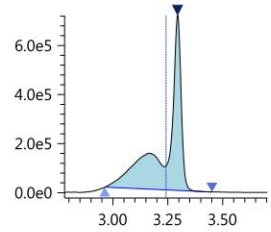

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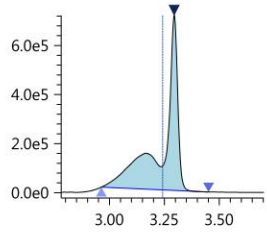

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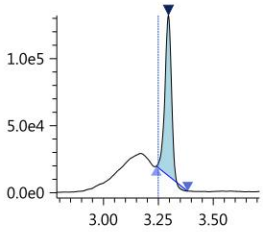

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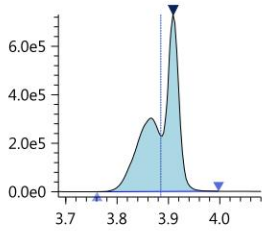

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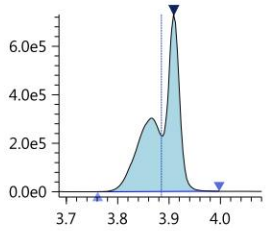

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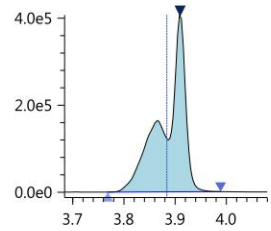

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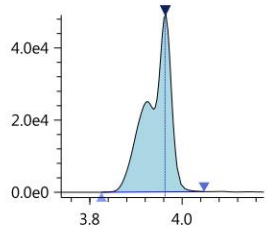

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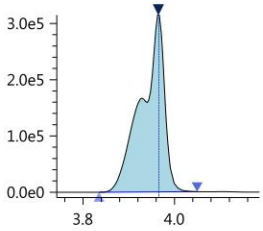

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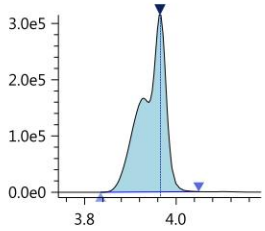

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RT 4.173 Area 6440072
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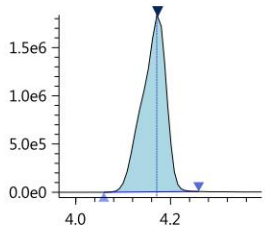
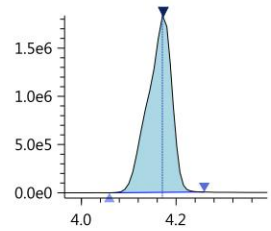


PFHxA-13C
Conc 4.5399
RT 4.173 Area 6440072
Q 314.90>270.10 (-) 1.84e6



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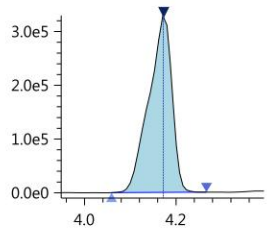
Conc 0.9926
RT 4.173 Area 1153818
Q 313.00>269.00 (-) 3.30e5



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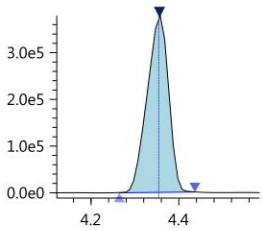
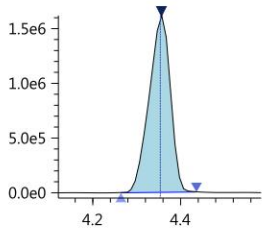
Conc 0.8756
RT 4.356 Area 1289119
Q 362.90>319.00 (-) 3.80e5



PFHpA-13C_IS
Conc 5.0000
RT 4.356 Area 5438615
ISTD 366.90>322.10 (-) 1.62e6



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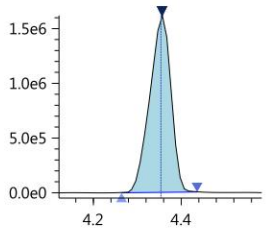
Conc 5.2586
RT 4.356 Area 5438615
Q 366.90>322.10 (-) 1.62e6



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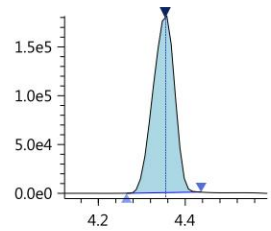
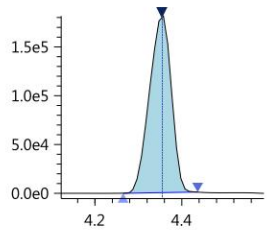
Conc 5.0000
RT 4.354 Area 639671
ISTD 402.70>84.05 (-) 1.82e5



PFHxS-18O
Conc 3.9134
RT 4.354 Area 639671
Q 402.70>84.05 (-) 1.82e5



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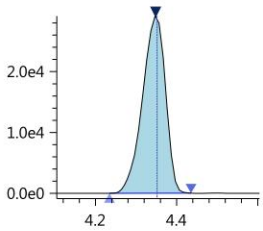
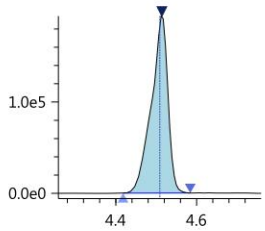
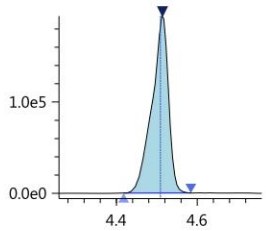
Conc 0.8665
RT 4.348 Area 115111
Q 399.00>80.00 (-) 2.91e4



6_2-FTS-13C
Conc 2.6464
RT 4.514 Area 552438
Q 428.90>409.00 (-) 1.94e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.514 Area 552438
ISTD 428.90>409.00 (-) 1.94e5



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6_2-FTS_1
Conc 0.8958
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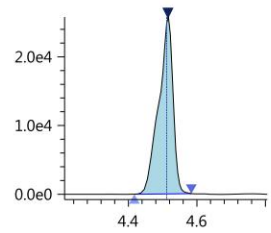
Q 427.00>407.00 (-) 2.58e4



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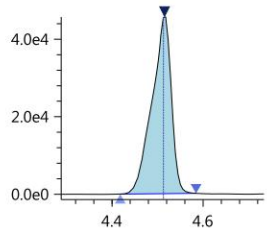
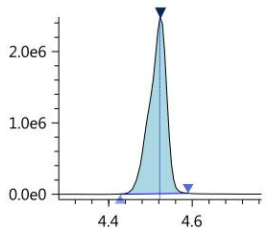
Conc 1.0645
RT 4.515 Area 135137
Q 449.00>80.15 (-) 4.57e4



PFOA-13C_IS
Conc 5.0000
RT 4.524 Area 6970230
ISTD 416.80>372.05 (-) 2.48e6



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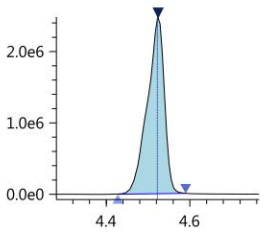
RT 4.524 Area 6970230
Q 416.80>372.05 (-) 2.48e6



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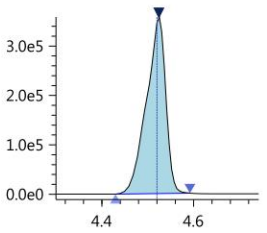
Q 413.00>369.00 (-) 3.59e5



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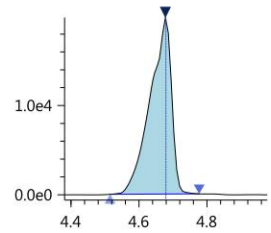
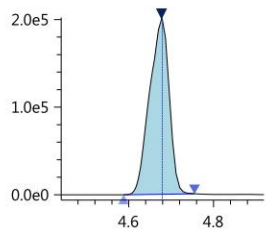
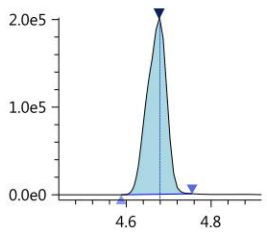
Conc 0.9494
RT 4.678 Area 86469
Q 499.00>80.00 (-) 1.99e4



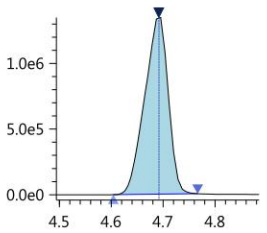
PFOS-13C_IS
Conc 5.0000
RT 4.677 Area 647182
ISTD 502.80>80.05 (-) 2.02e5



PFOS-13C
Conc 3.8898
RT 4.677 Area 647182
Q 502.80>80.05 (-) 2.02e5



PFNA-13C_IS
Conc 5.0000
RT 4.692 Area 4261475
ISTD 467.80>423.00 (-) 1.35e6



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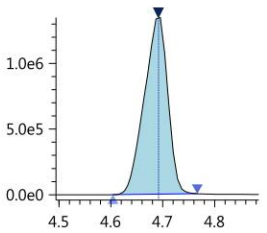
RT 4.692 Area 4261475
Q 467.80>423.00 (-) 1.35e6



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Conc 1.0309
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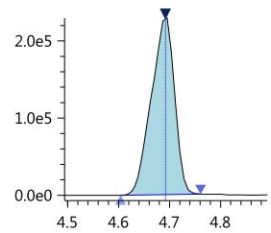
Q 463.00>418.90 (-) 2.30e5



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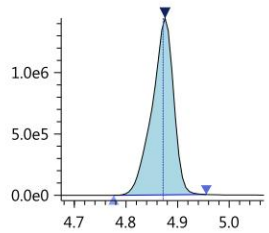
ISTD 514.80>469.95 (-) 1.45e6



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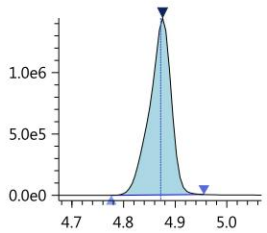
Q 514.80>469.95 (-) 1.45e6



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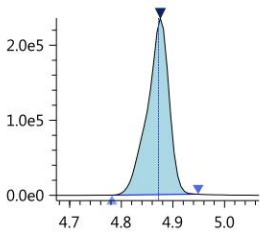
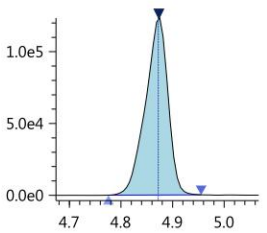
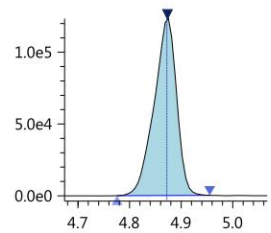
Conc 0.9738
RT 4.876 Area 684174
Q 513.00>468.80 (-) 2.36e5



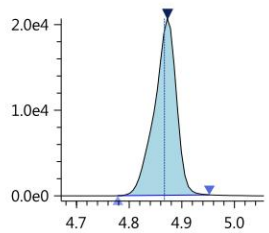
8_2-FTS-13C_IS
Conc 5.0000
RT 4.873 Area 374036
ISTD 528.80>509.00 (-) 1.23e5



8_2-FTS-13C
Conc 2.6568
RT 4.873 Area 374036
Q 528.80>509.00 (-) 1.23e5



8_2-FTS_1
Conc 0.8875
RT 4.873 Area 59665
Q 527.10>506.90 (-) 2.07e4



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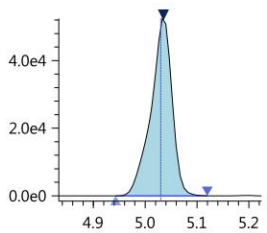
Conc 1.1212
RT 5.035 Area 148292
Q 599.00>79.90 (-) 5.24e4



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Conc 0.9936
RT 5.058 Area 750385
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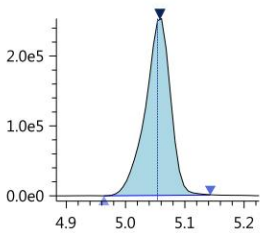

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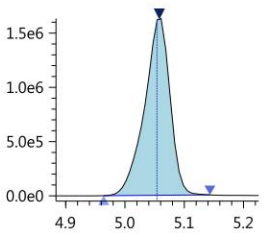
Conc 5.0000
RT 5.058 Area 4880032
ISTD 564.80>519.95 (-) 1.63e6



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PFUnA-13C
Conc 4.3355
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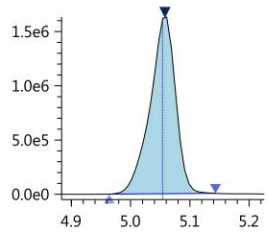
Q 564.80>519.95 (-) 1.63e6



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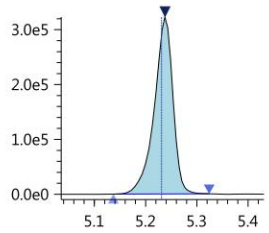
Conc 1.0704
RT 5.238 Area 814419
Q 613.05>569.00 (-) 3.23e5



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Conc 4.2952
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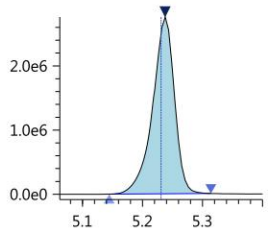
Q 614.80>569.95 (-) 2.76e6



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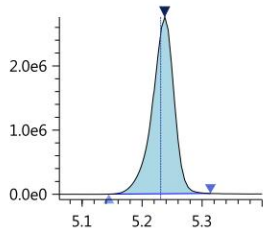

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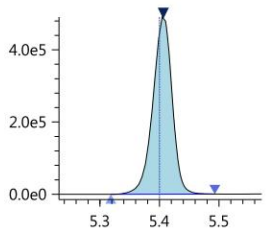
Conc 0.8427
RT 5.406 Area 1108877
Q 663.00>618.90 (-) 4.91e5



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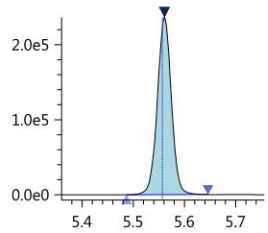
RT 5.561 Area 449770
Q 713.40>669.00 (-) 2.36e5



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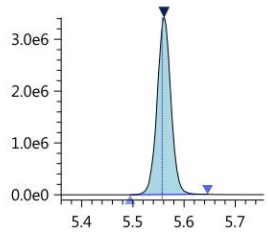
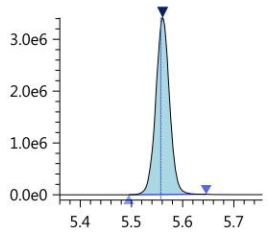
Conc 5.3843
RT 5.561 Area 6428608
Q 714.70>669.90 (-) 3.42e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.561 Area 6428608
ISTD 714.70>669.90 (-) 3.42e6



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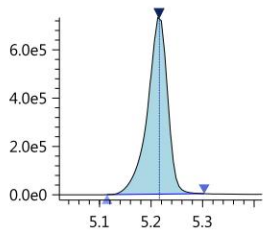
Conc 5.0000
RT 5.216 Area 1995554
ISTD 506.00>78.05 (-) 7.34e5



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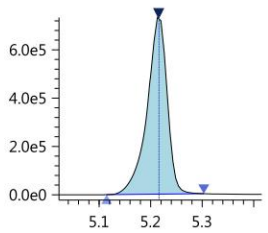
Conc 5.0870
RT 5.216 Area 1995554
Q 506.00>78.05 (-) 7.34e5



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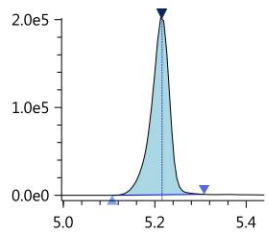
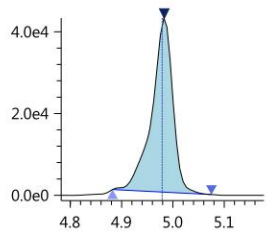
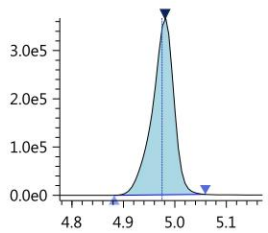
Conc 0.8913
RT 5.215 Area 560439
Q 498.20>78.00 (-) 2.02e5



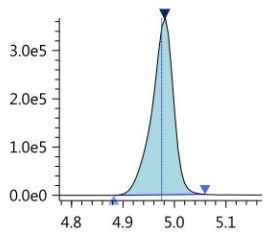
N-MeFOSAA
Conc 1.0686
RT 4.983 Area 120632
Q 570.20>419.00 (-) 4.34e4



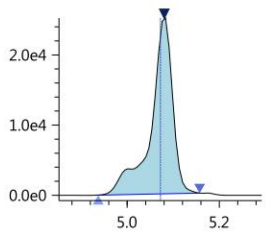
N-MeFOSAA-d3
Conc 7.9103
RT 4.981 Area 1063080
Q 572.80>419.05 (-) 3.67e5



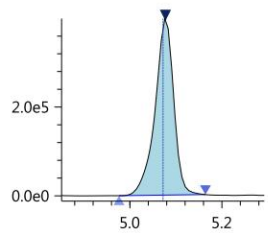
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.981 Area 1063080
ISTD 572.80>419.05 (-) 3.67e5



N-EtFOSAA
Conc 0.9170
RT 5.080 Area 82063
Q 584.20>418.95 (-) 2.53e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.077 Area 1120358
ISTD 588.80>419.00 (-) 3.99e5



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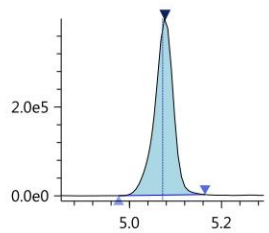
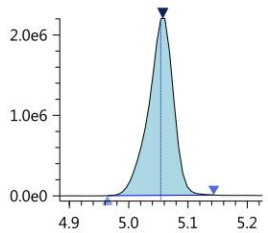
Q 588.80>419.00 (-) 3.99e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.058 Area 6471741
ISTD 570.00>525.00 (-) 2.20e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_122
Lab ID: KQ1818747-05
RunType: LCS
Matrix: Water

Date Acquired: 1/5/19 11:34
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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: _____

Printed: 1/18/19 10:55
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Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_122	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:34	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818747-05	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/17/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	KQ1818747
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	20001

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.074	+0.00	4851773	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.977	0.00	805956	4.1509	83	20 - 109	Y
18O2-PFHxS	4.368		642379	4.7955	96	26 - 122	Y
13C4-PFOS	4.692		599886	4.2908	86	25 - 121	Y
13C4-PFBA	3.314	-0.01	2663461	4.2782	86	27 - 124	Y
13C5-PFPeA	3.921	0.00	1735963	5.0038	100	27 - 138	Y
13C2-PFHxA	4.188		5368526	4.6340	93	28 - 132	Y
13C4-PFHpA	4.369		4224100	4.8606	97	19 - 139	Y
13C4-PFOA	4.536	0.00	4647600	4.0120	80	22 - 130	Y
13C5-PFNA	4.706		4337752	4.5003	90	20 - 127	Y
13C2-PFDA	4.891		3830637	4.5525	91	24 - 125	Y
13C2-PFUnDA	5.074	+0.00	3122654	3.9663	79	22 - 125	Y
13C2-PFDoDA	5.254	+0.00	4131129	3.6163	72	19 - 122	Y
13C2-PFTeDA	5.579	+0.00	3282638	4.0159	80	13 - 124	Y
13C8-FOSA	5.231	+0.00	1370449	3.6841	74	18 - 109	Y
D3-MeFOSA	5.624	+0.01	361008	3.4104	68	15 - 153	Y
D5-EtFOSA	5.762	+0.00	621260	3.5001	70	25 - 107	Y
D7-MeFOSE	5.595	+0.01	612402	3.9826	80	24 - 112	Y
D9-EtFOSE	5.728	+0.01	653636	3.9386	79	19 - 109	Y
D3-MeFOSAA	4.996	+0.00	593514	4.0313	81	9 - 123	Y
D5-EtFOSAA	5.094	+0.00	603122	4.2671	85	12 - 126	Y
13C2-6:2 FTS	4.527		403419	3.3474	67	10 - 226	Y
13C2-8:2 FTS	4.888	0.00	365890	3.9039	78	10 - 202	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 CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_122	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:34	**Vial:**	4
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1818747-05	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.975	0.00	157178	0.9574	30.6		Y
Perfluorohexane sulfonic acid (PFHxS)	4.366	0.00	114744	0.9271	29.7		Y
Perfluoroheptane sulfonic acid (PFHpS)	4.528	0.00	126910	0.9801	31.4		Y
Perfluorooctane sulfonic acid (PFOS)	4.691		85991	0.9720	31.1		Y
Perfluorodecane sulfonic acid (PFDS)	5.050		99759	0.9044	28.9		Y
Perfluorobutanoic acid (PFBA)	3.315	-0.01	491855	1.0810	34.6		Y
Perfluoropentanoic acid (PFPeA)	3.921	0.00	912832	0.9944	31.8		Y
Perfluorohexanoic acid (PFHxA)	4.188	+0.00	995122	1.0494	33.6		Y
Perfluoroheptanoic acid (PFHpA)	4.369	+0.00	792393	0.8777	28.1		Y
Perfluorooctanoic acid (PFOA)	4.537		891746	1.1697	37.4		Y
Perfluorononanoic acid (PFNA)	4.706	0.00	589278	1.0228	32.7		Y
Perfluorodecanoic acid (PFDA)	4.891		624919	0.9744	31.2		Y
Perfluoroundecanoic acid (PFUnDA)	5.074	+0.00	507814	1.0061	32.2		Y
Perfluorododecanoic acid (PFDoDA)	5.254	+0.00	490826	1.0946	35.0		Y
Perfluorotridecanoic acid (PFTrDA)	5.426	+0.00	577551	0.9794	31.3		Y
Perfluorotetradecanoic acid (PFTeDA)	5.579	+0.00	241400	1.0853	34.7		Y
Perfluorooctane sulfonamide (FOSA)	5.230	+0.00	355401	0.9707	31.1		Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.627	+0.00	104133	1.0924	35.0		Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.768	+0.01	20068	0.9113	29.2		Y
N-Methyl perfluorooctane sulfonamidoethanol	5.603	+0.01	173911	0.9774	31.3		Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.739	+0.01	134675	0.8471	27.1		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.000	+0.00	72438	1.1643	37.3		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.098		56307	1.0409	33.3		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.527		85904	1.1524	36.9		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.888		63801	0.9892	31.7		Y

Prep Amount:	250 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

Insight Report

Printed at 1/18/2019 10:42:01 AM

010419_122

Sample ID: KQ1818747-05
Date acquired: 1/5/2019 11:34:55 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_122.lcd
Vial: 24 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.314	2579626	2579626	2	5.0000	ng/mL	----
PFBA-13C	M	3.314	2663461	4851773	26	4.2782	ng/mL	----
PFBA	M	3.315	491855	2579626	2	1.0810	ng/mL	----
PFPeA-13C_IS	Auto	3.921	1735963	1735963	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.921	1735963	4851773	26	5.0038	ng/mL	----
PFPeA	Auto	3.921	912832	1735963	4	0.9944	ng/mL	----
PFBS_1	Auto	3.975	157178	805956	16	0.9574	ng/mL	----
PFBS-13C	Auto	3.977	805956	4851773	26	4.1509	ng/mL	----
PFBS-13C_IS	Auto	3.977	805956	805956	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.188	5368526	5368526	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.188	5368526	4851773	26	4.6340	ng/mL	----
PFHxA	Auto	4.188	995122	5368526	6	1.0494	ng/mL	----
PFHpA	Auto	4.369	792393	4224100	8	0.8777	ng/mL	----
PFHpA-13C_IS	Auto	4.369	4224100	4224100	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.369	4224100	4851773	26	4.8606	ng/mL	----
PFHxS-18O_IS	Auto	4.368	642379	642379	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.368	642379	4851773	26	4.7955	ng/mL	----
PFHxS_1	Auto	4.366	114744	642379	7	0.9271	ng/mL	----
6_2-FTS-13C	Auto	4.527	403419	4851773	26	3.3474	ng/mL	----
6_2-FTS-13C_IS	Auto	4.527	403419	403419	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.527	85904	403419	10	1.1524	ng/mL	----
PFHpS_1	Auto	4.528	126910	642379	7	0.9801	ng/mL	----
PFOA-13C_IS	Auto	4.536	4647600	4647600	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.536	4647600	4851773	26	4.0120	ng/mL	----
PFOA	Auto	4.537	891746	4647600	9	1.1697	ng/mL	----
PFOS_1	Auto	4.691	85991	599886	13	0.9720	ng/mL	----
PFOS-13C_IS	Auto	4.692	599886	599886	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.692	599886	4851773	26	4.2908	ng/mL	----
PFNA-13C_IS	Auto	4.706	4337752	4337752	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.706	4337752	4851773	26	4.5003	ng/mL	----
PFNA	Auto	4.706	589278	4337752	11	1.0228	ng/mL	----
PFDA-13C_IS	Auto	4.891	3830637	3830637	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.891	3830637	4851773	26	4.5525	ng/mL	----
PFDA	Auto	4.891	624919	3830637	12	0.9744	ng/mL	----
8_2-FTS-13C_IS	Auto	4.888	365890	365890	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.888	365890	4851773	26	3.9039	ng/mL	----
8_2-FTS_1	Auto	4.888	63801	365890	15	0.9892	ng/mL	----
PFDS_1	Auto	5.050	99759	599886	13	0.9044	ng/mL	----
PFUnA	Auto	5.074	507814	3122654	14	1.0061	ng/mL	----
PFUnA-13C_IS	Auto	5.074	3122654	3122654	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.074	3122654	4851773	26	3.9663	ng/mL	----
PFDoA	Auto	5.254	490826	4131129	17	1.0946	ng/mL	----
PFDoA-13C	Auto	5.254	4131129	4851773	26	3.6163	ng/mL	----
PFDoA-13C_IS	Auto	5.254	4131129	4131129	17	5.0000	ng/mL	----
PFTrDA	Auto	5.426	577551	3282638	22	0.9794	ng/mL	----
PFTeDA	Auto	5.579	241400	3282638	22	1.0853	ng/mL	----
PFTeDA-13C	Auto	5.579	3282638	4851773	26	4.0159	ng/mL	----
PFTeDA-13C_IS	Auto	5.579	3282638	3282638	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.231	1370449	1370449	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.231	1370449	4851773	26	3.6841	ng/mL	----
FOSA	Auto	5.230	355401	1370449	18	0.9707	ng/mL	----
N-MeFOSAA	M	5.000	72438	593514	19	1.1643	ng/mL	----
N-MeFOSAA-d3	Auto	4.996	593514	4851773	26	4.0313	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.996	593514	593514	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.624	361008	361008	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.624	361008	4851773	26	3.4104	ng/mL	----
N-MeFOSA	Auto	5.627	104133	361008	1	1.0924	ng/mL	----
N-MeFOSE-d7	Auto	5.595	612402	4851773	26	3.9826	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.595	612402	612402	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.603	173911	612402	20	0.9774	ng/mL	----
N-EtFOSAA	Auto	5.098	56307	603122	21	1.0409	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.094	603122	603122	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.094	603122	4851773	26	4.2671	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.762	621260	621260	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.762	621260	4851773	26	3.5001	ng/mL	----
N-EtFOSA	Auto	5.768	20068	621260	23	0.9113	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.728	653636	653636	24	5.0000	ng/mL	----

Insight Report

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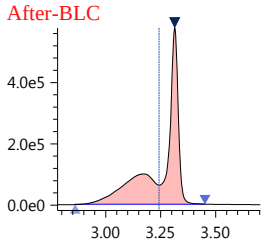
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.728	653636	4851773	26	3.9386	ng/mL	----
N-EtFOSE	Auto	5.739	134675	653636	24	0.8471	ng/mL	----
13C7-PFUnDA_IS	Auto	5.074	4851773	4851773	26	5.0000	ng/mL	----

PFBA-13C_IS
Conc 5.0000
RT 3.314 Area 2579626
ISTD 216.90>172.15 (-) 5.78e5



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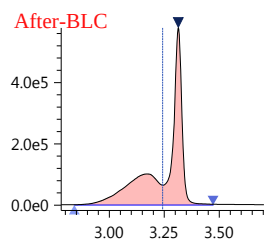
Q 216.90>172.15 (-) 5.78e5



PFBA
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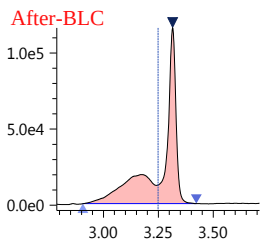
RT 3.315 Area 491855
Q 213.00>169.10 (-) 1.17e5



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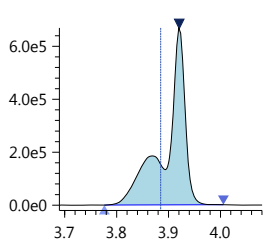
RT 3.921 Area 1735963
ISTD 267.90>223.00 (-) 6.70e5



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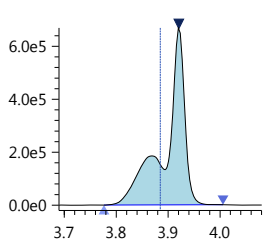

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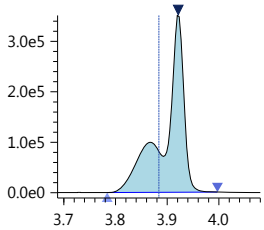
RT 3.921 Area 912832
Q 263.05>219.10 (-) 3.52e5



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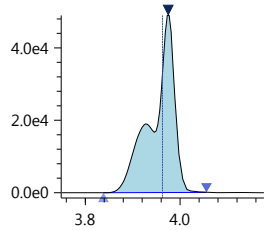
RT 3.975 Area 157178
Q 299.00>80.00 (-) 4.90e4



PFBS-13C
Conc 4.1509
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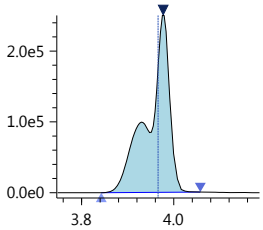
Q 301.80>80.00 (-) 2.50e5



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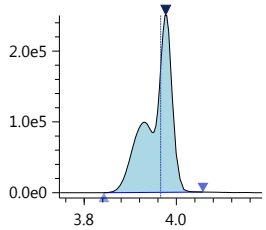
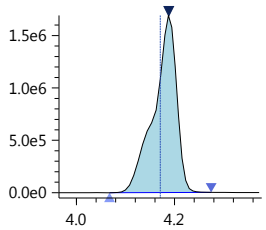
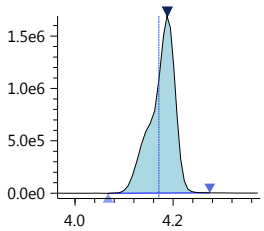


PFHxA-13C_IS
Conc 5.0000
RT 4.188 Area 5368526
ISTD 314.90>270.10 (-) 1.69e6



PFHxA-13C
Conc 4.6340
RT 4.188 Area 5368526
Q 314.90>270.10 (-) 1.69e6



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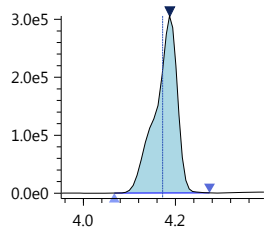
Conc 1.0494
RT 4.188 Area 995122
Q 313.00>269.00 (-) 3.06e5



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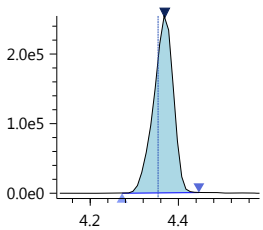
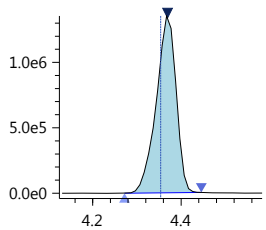
Conc 0.8777
RT 4.369 Area 792393
Q 362.90>319.00 (-) 2.55e5



PFHpA-13C_IS
Conc 5.0000
RT 4.369 Area 4224100
ISTD 366.90>322.10 (-) 1.36e6



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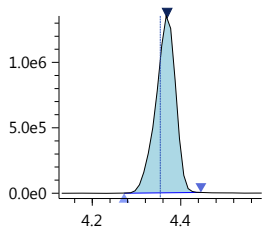
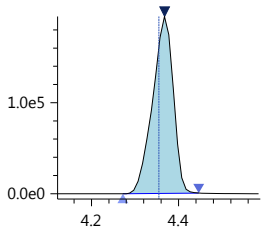
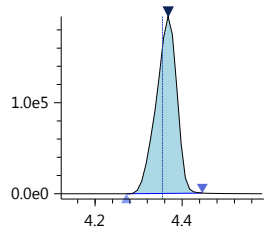
Conc 4.8606
RT 4.369 Area 4224100
Q 366.90>322.10 (-) 1.36e6



PFHxS-18O_IS
Conc 5.0000
RT 4.368 Area 642379
ISTD 402.70>84.05 (-) 1.95e5



PFHxS-18O
Conc 4.7955
RT 4.368 Area 642379
Q 402.70>84.05 (-) 1.95e5



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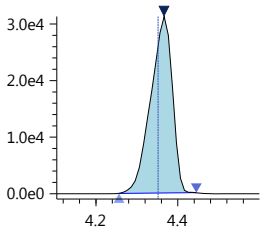
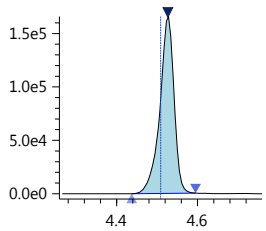
RT 4.366 Area 114744
Q 399.00>80.00 (-) 3.13e4



6_2-FTS-13C
Conc 3.3474
RT 4.527 Area 403419
Q 428.90>409.00 (-) 1.66e5



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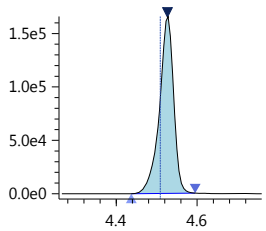
ISTD 428.90>409.00 (-) 1.66e5



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6_2-FTS_1
Conc 1.1524
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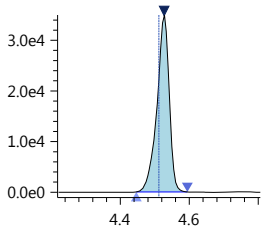
Q 427.00>407.00 (-) 3.50e4



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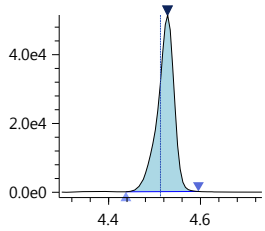
RT 4.528 Area 126910
Q 449.00>80.15 (-) 5.15e4



PFOA-13C_IS
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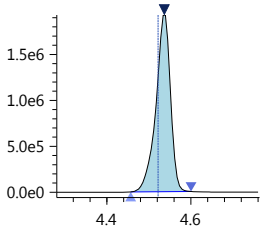
ISTD 416.80>372.05 (-) 1.93e6



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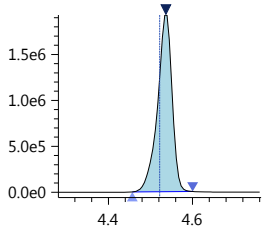
Q 416.80>372.05 (-) 1.93e6



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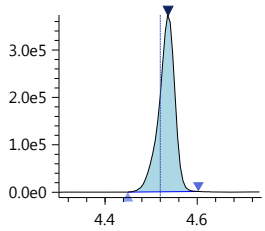
Q 413.00>369.00 (-) 3.74e5



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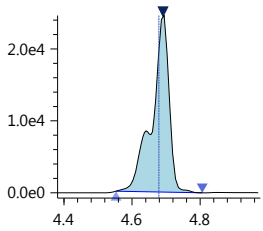
Conc 0.9720
RT 4.691 Area 85991
Q 499.00>80.00 (-) 2.47e4



PFOS-13C_IS
Conc 5.0000
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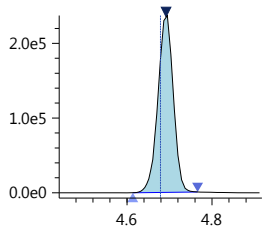
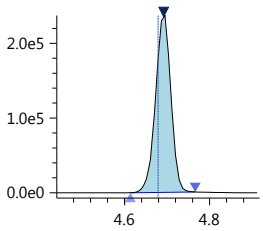
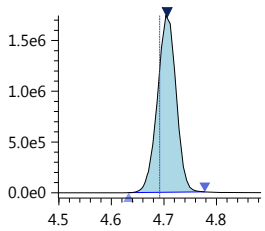
ISTD 502.80>80.05 (-) 2.37e5



PFOS-13C
Conc 4.2908
RT 4.692 Area 599886
Q 502.80>80.05 (-) 2.37e5



PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4337752
ISTD 467.80>423.00 (-) 1.75e6



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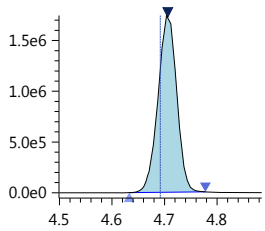
RT 4.706 Area 4337752
Q 467.80>423.00 (-) 1.75e6



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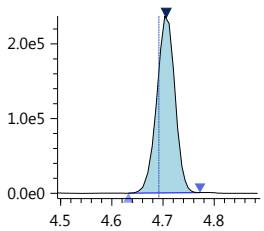
RT 4.706 Area 589278
Q 463.00>418.90 (-) 2.37e5



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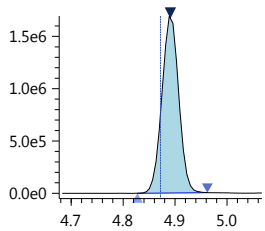
ISTD 514.80>469.95 (-) 1.69e6



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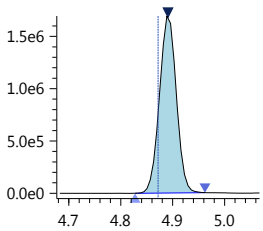
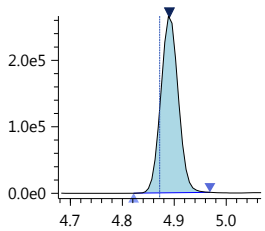
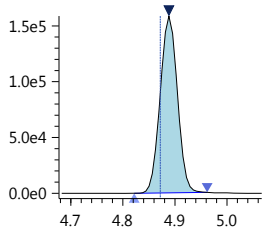
RT 4.891 Area 3830637
Q 514.80>469.95 (-) 1.69e6



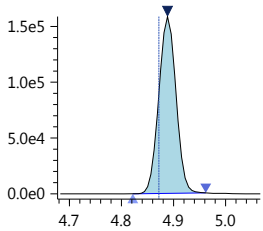
PFDA
Conc 0.9744
RT 4.891 Area 624919
Q 513.00>468.80 (-) 2.67e5



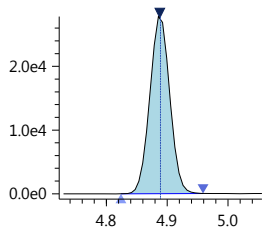
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 365890
ISTD 528.80>509.00 (-) 1.59e5



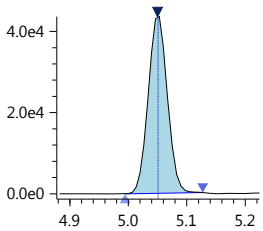
8_2-FTS-13C
Conc 3.9039
RT 4.888 Area 365890
Q 528.80>509.00 (-) 1.59e5



8_2-FTS_1
Conc 0.9892
RT 4.888 Area 63801
Q 527.10>506.90 (-) 2.78e4



PFDS_1
Conc 0.9044
RT 5.050 Area 99759
Q 599.00>79.90 (-) 4.37e4



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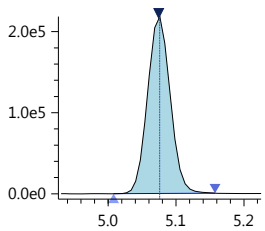
Conc 1.0061
RT 5.074 Area 507814
Q 563.00>518.90 (-) 2.19e5



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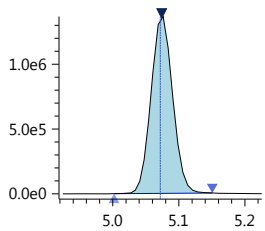
Conc 5.0000
RT 5.074 Area 3122654
ISTD 564.80>519.95 (-) 1.37e6



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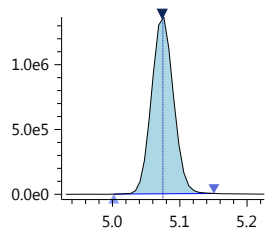
PFUnA-13C
Conc 3.9663
RT 5.074 Area 3122654
Q 564.80>519.95 (-) 1.37e6



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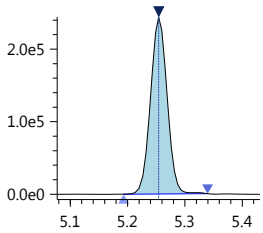
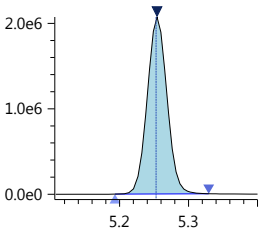
Conc 1.0946
RT 5.254 Area 490826
Q 613.05>569.00 (-) 2.44e5



PFDoA-13C
Conc 3.6163
RT 5.254 Area 4131129
Q 614.80>569.95 (-) 2.07e6



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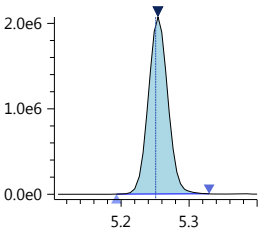
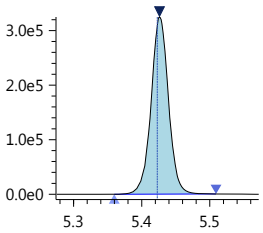
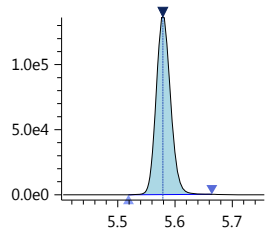
RT 5.254 Area 4131129
ISTD 614.80>569.95 (-) 2.07e6



PFTrDA
Conc 0.9794
RT 5.426 Area 577551
Q 663.00>618.90 (-) 3.25e5



PFTeDA
Conc 1.0853
RT 5.579 Area 241400
Q 713.40>669.00 (-) 1.36e5



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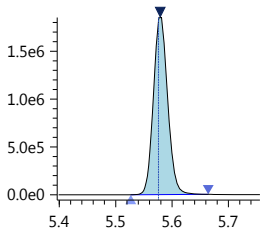
Conc 4.0159
RT 5.579 Area 3282638
Q 714.70>669.90 (-) 1.85e6



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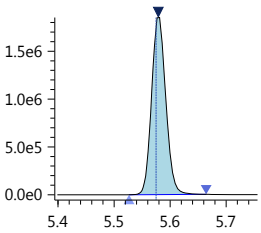
Conc 5.0000
RT 5.579 Area 3282638
ISTD 714.70>669.90 (-) 1.85e6



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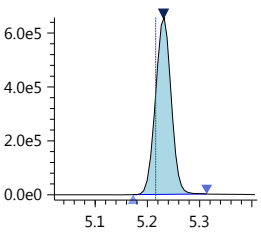
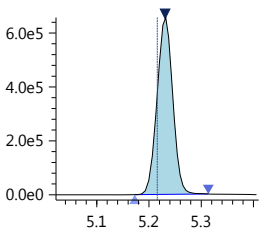
Conc 5.0000
RT 5.231 Area 1370449
ISTD 506.00>78.05 (-) 6.58e5



FOSA-13C
Conc 3.6841
RT 5.231 Area 1370449
Q 506.00>78.05 (-) 6.58e5



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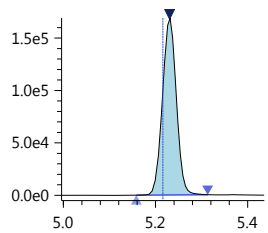
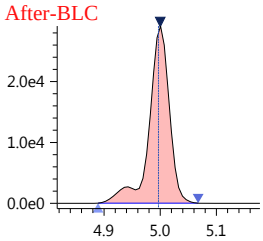
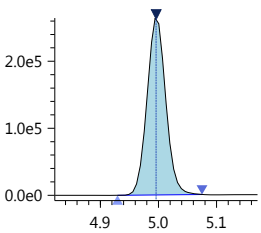
Q 498.20>78.00 (-) 1.69e5



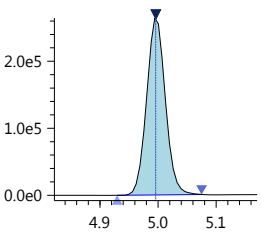
N-MeFOSAA
Conc 1.1643
RT 5.000 Area 72438
Q 570.20>419.00 (-) 2.91e4



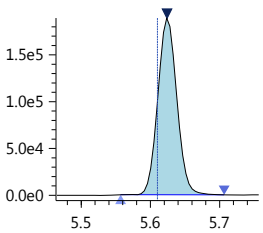
N-MeFOSAA-d3
Conc 4.0313
RT 4.996 Area 593514
Q 572.80>419.05 (-) 2.65e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.996 Area 593514
ISTD 572.80>419.05 (-) 2.65e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 361008
ISTD 514.90>168.90 (-) 1.89e5



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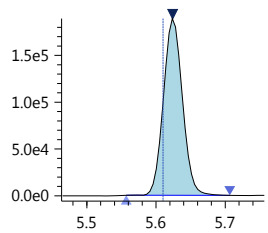
Conc 3.4104
RT 5.624 Area 361008
Q 514.90>168.90 (-) 1.89e5



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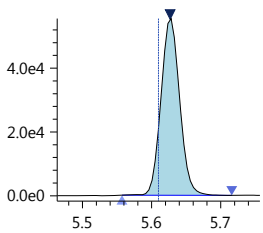
Conc 1.0924
RT 5.627 Area 104133
Q 512.00>169.10 (-) 5.56e4



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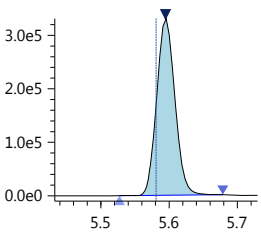
Conc 3.9826
RT 5.595 Area 612402
Q 622.70>59.10 (-) 3.31e5



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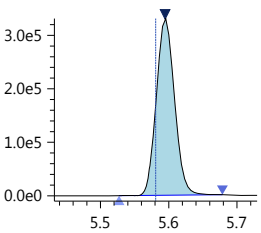

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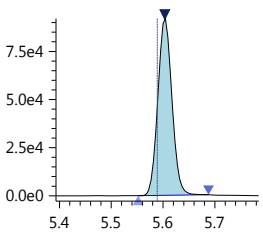
Q 616.00>59.00 (-) 9.21e4



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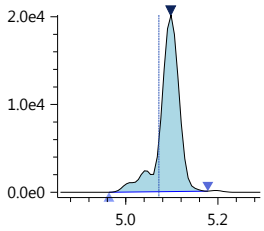
Conc 1.0409
RT 5.098 Area 56307
Q 584.20>418.95 (-) 2.02e4



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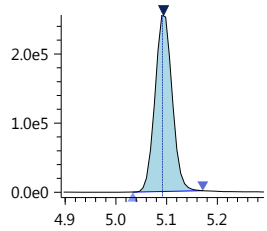
ISTD 588.80>419.00 (-) 2.56e5



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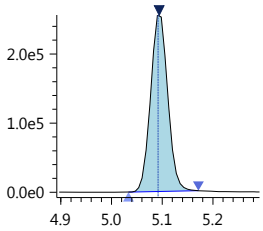
RT 5.094 Area 603122
Q 588.80>419.00 (-) 2.56e5



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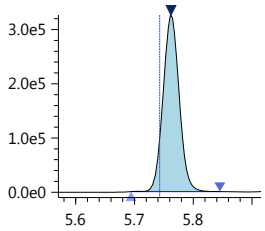
ISTD 530.90>169.15 (-) 3.27e5



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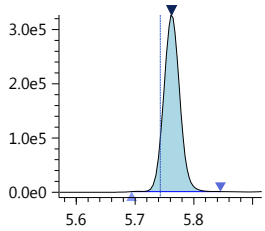
Q 530.90>169.15 (-) 3.27e5



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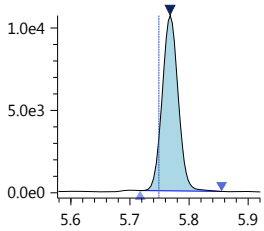
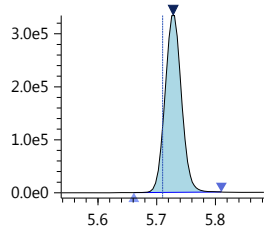
Conc 0.9113
RT 5.768 Area 20068
Q 526.90>169.10 (-) 1.08e4



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.728 Area 653636
ISTD 638.70>59.10 (-) 3.35e5



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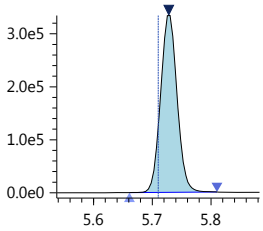

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RT 5.739 Area 134675
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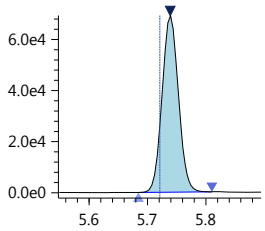

13C7-PFUnDA_IS
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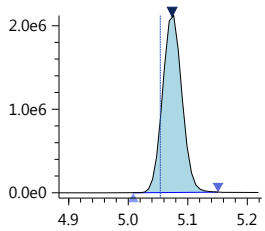
ISTD 570.00>525.00 (-) 2.12e6



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Printed at 1/18/2019 8:51:07 AM

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Date acquired: 1/5/2019 11:34:55 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_122.lcd
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PFBA-13C_IS
Conc 5.0000
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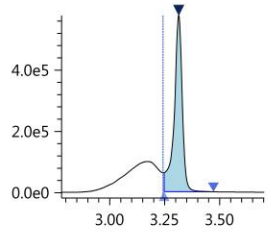
ISTD 216.90>172.15 (-) 5.78e5



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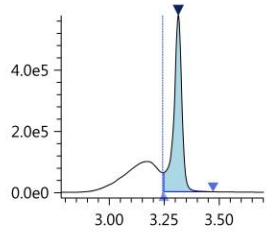

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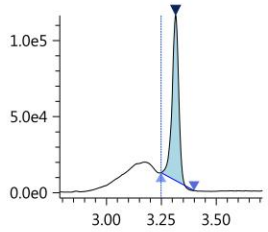

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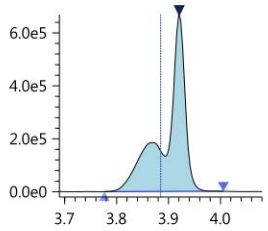
ISTD 267.90>223.00 (-) 6.70e5



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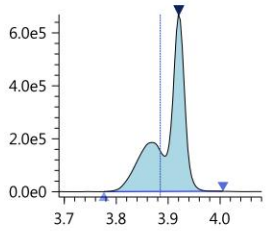

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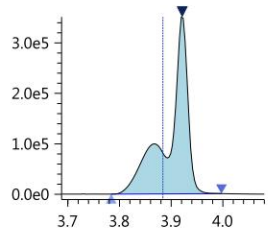

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RT 3.975 Area 157178
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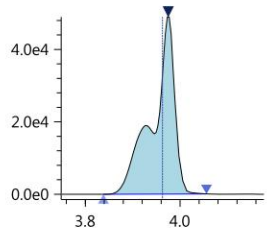

PFBS-13C
Conc 4.1509
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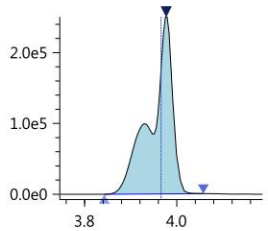
Q 301.80>80.00 (-) 2.50e5



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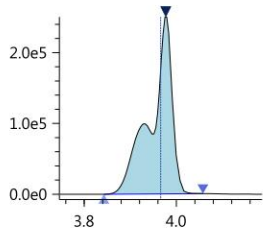

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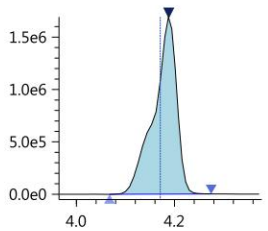

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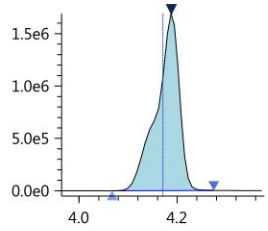

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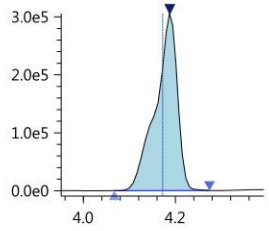

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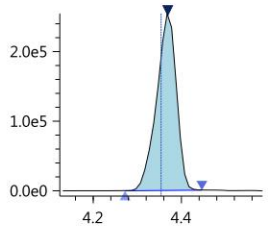

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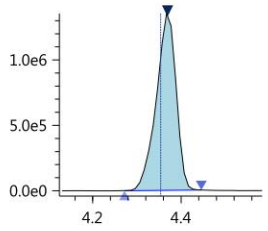
ISTD 366.90>322.10 (-) 1.36e6



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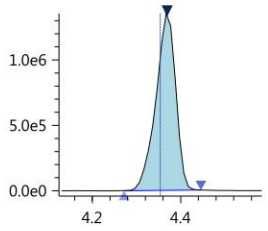
Q 366.90>322.10 (-) 1.36e6



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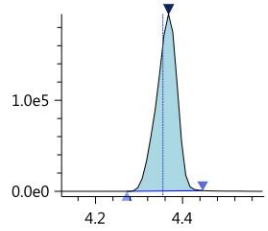
RT 4.368 Area 642379
ISTD 402.70>84.05 (-) 1.95e5



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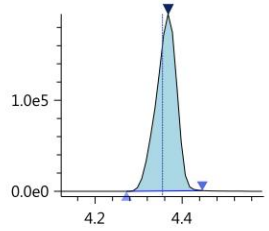

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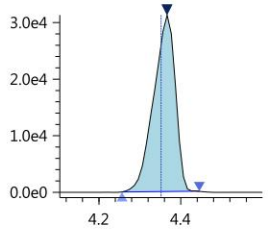
RT 4.366 Area 114744
Q 399.00>80.00 (-) 3.13e4



6_2-FTS-13C
Conc 3.3474
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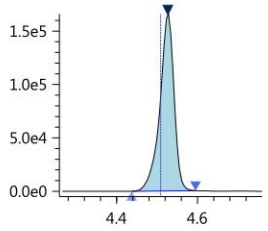
Q 428.90>409.00 (-) 1.66e5



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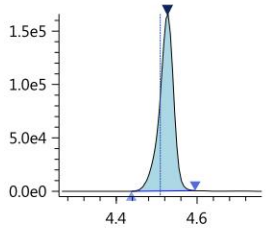

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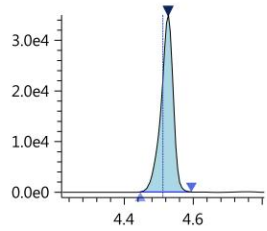
Q 427.00>407.00 (-) 3.50e4



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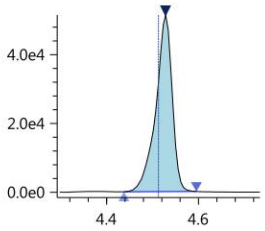

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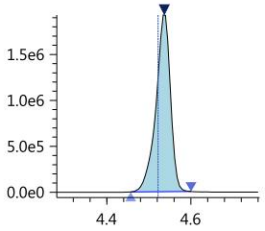

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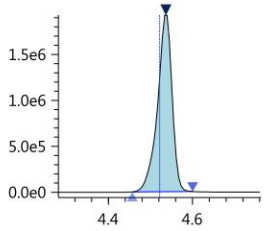
Q 416.80>372.05 (-) 1.93e6



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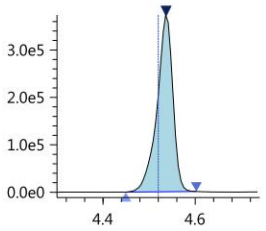
Q 413.00>369.00 (-) 3.74e5



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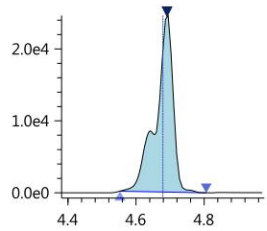
RT 4.691 Area 85991
Q 499.00>80.00 (-) 2.47e4



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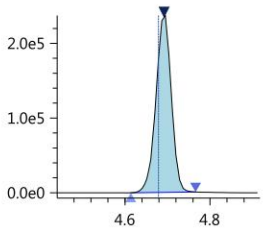
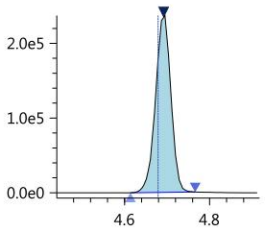


PFOS-13C
Conc 4.2908
RT 4.692 Area 599886
Q 502.80>80.05 (-) 2.37e5



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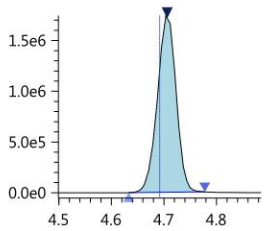
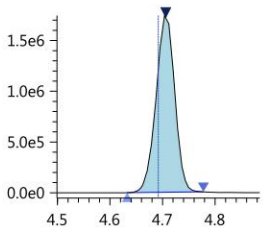
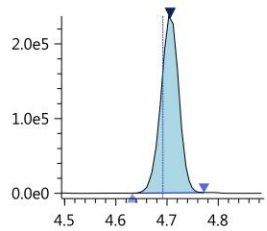
RT 4.706 Area 4337752
ISTD 467.80>423.00 (-) 1.75e6



PFNA-13C
Conc 4.5003
RT 4.706 Area 4337752
Q 467.80>423.00 (-) 1.75e6



PFNA
Conc 1.0228
RT 4.706 Area 589278
Q 463.00>418.90 (-) 2.37e5



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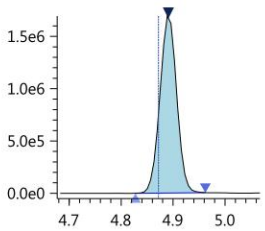
RT 4.891 Area 3830637
ISTD 514.80>469.95 (-) 1.69e6



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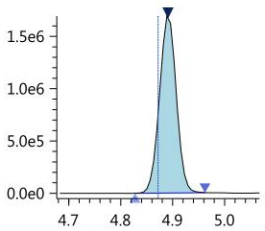

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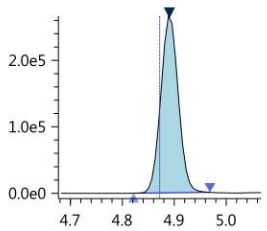
RT 4.891 Area 624919
Q 513.00>468.80 (-) 2.67e5



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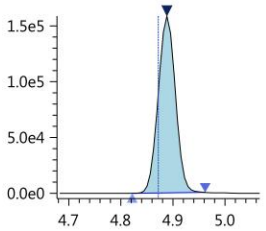
RT 4.888 Area 365890
ISTD 528.80>509.00 (-) 1.59e5



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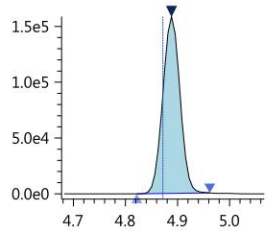
RT 4.888 Area 365890
Q 528.80>509.00 (-) 1.59e5



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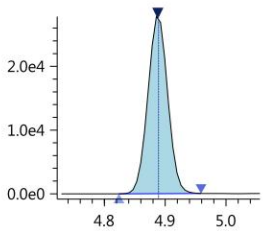
Q 527.10>506.90 (-) 2.78e4



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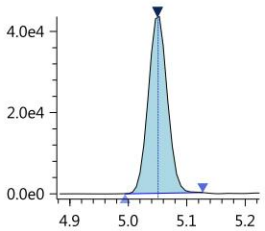

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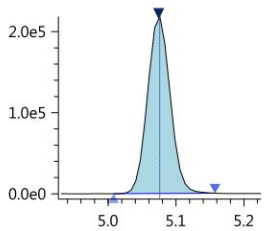
Q 563.00>518.90 (-) 2.19e5



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RT 5.074 Area 3122654
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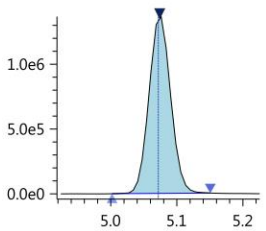

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Conc 3.9663
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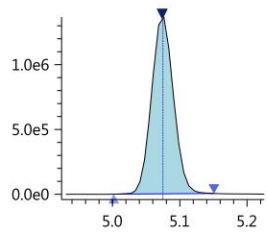
Q 564.80>519.95 (-) 1.37e6



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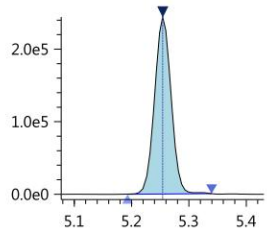
Q 613.05>569.00 (-) 2.44e5



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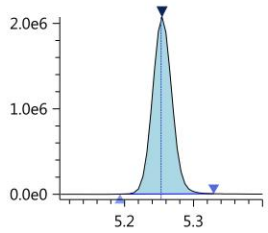
RT 5.254 Area 4131129
Q 614.80>569.95 (-) 2.07e6



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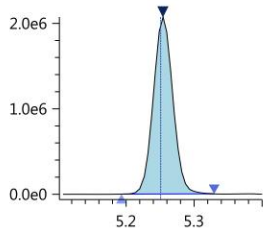

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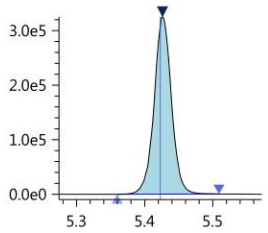

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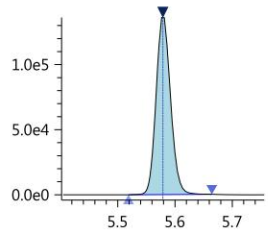
Q 713.40>669.00 (-) 1.36e5



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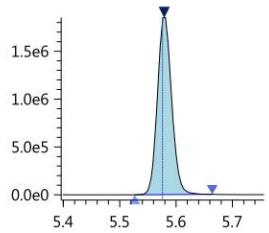
Q 714.70>669.90 (-) 1.85e6



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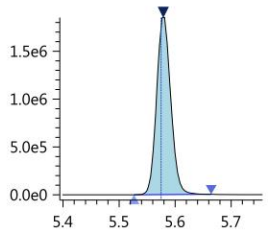

FOSA-13C_IS
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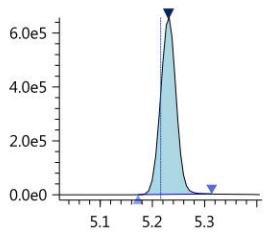
RT 5.231 Area 1370449
ISTD 506.00>78.05 (-) 6.58e5



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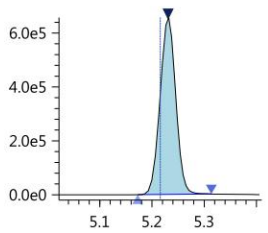

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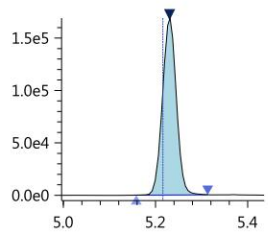

N-MeFOSAA
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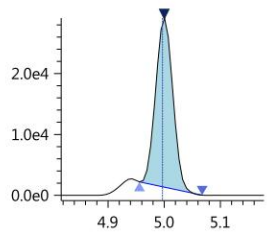
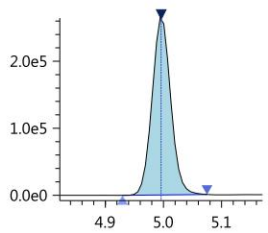
Q 570.20>419.00 (-) 2.91e4



N-MeFOSAA-d3
Conc 4.0313
RT 4.996 Area 593514
Q 572.80>419.05 (-) 2.65e5



N-MeFOSAA-d3_IS
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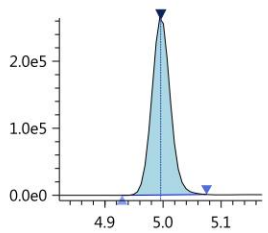
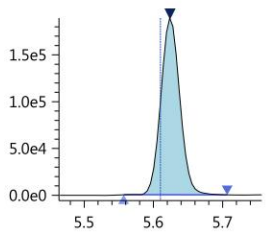
ISTD 572.80>419.05 (-) 2.65e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 361008
ISTD 514.90>168.90 (-) 1.89e5



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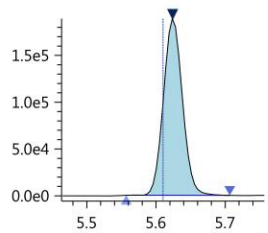
Conc 3.4104
RT 5.624 Area 361008
Q 514.90>168.90 (-) 1.89e5



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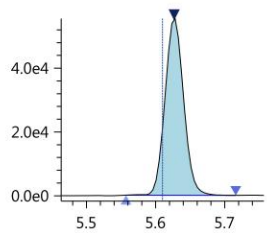
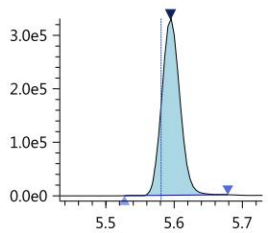
RT 5.627 Area 104133
Q 512.00>169.10 (-) 5.56e4



N-MeFOSE-d7
Conc 3.9826
RT 5.595 Area 612402
Q 622.70>59.10 (-) 3.31e5



N-MeFOSE-d7_IS
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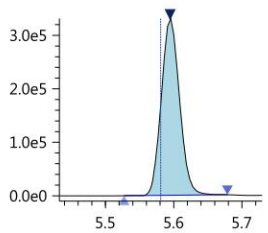

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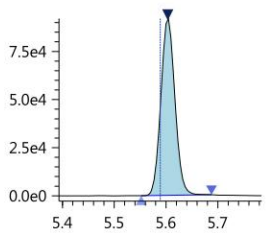
RT 5.603 Area 173911
Q 616.00>59.00 (-) 9.21e4



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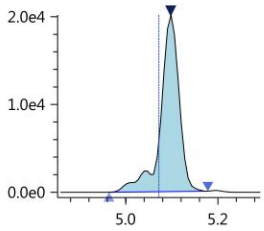
Q 584.20>418.95 (-) 2.02e4



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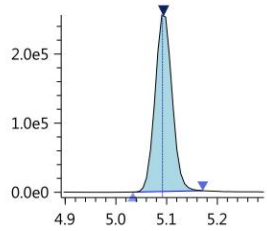

N-EtFOSAA-d5
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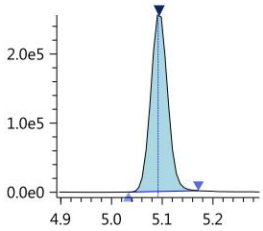
Q 588.80>419.00 (-) 2.56e5



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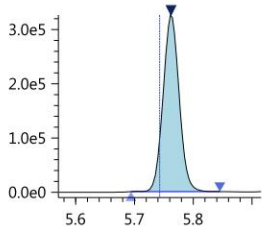
ISTD 530.90>169.15 (-) 3.27e5



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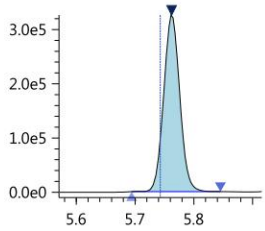
Q 530.90>169.15 (-) 3.27e5



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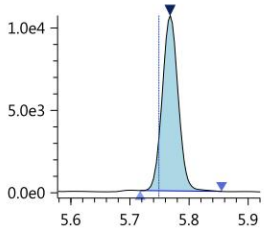

N-EtFOSE-d9_IS
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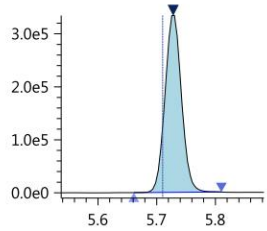
RT 5.728 Area 653636
ISTD 638.70>59.10 (-) 3.35e5



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RT 5.728 Area 653636
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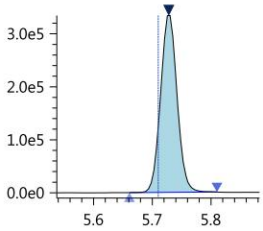

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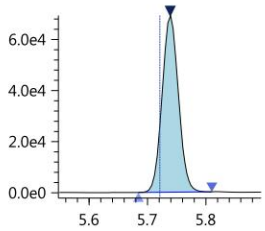
RT 5.739 Area 134675
Q 630.00>58.90 (-) 6.94e4



13C7-PFUnDA_IS
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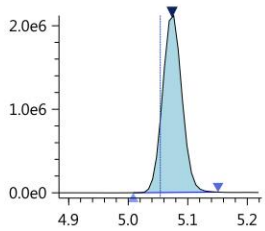
RT 5.074 Area 4851773
ISTD 570.00>525.00 (-) 2.12e6



1st CM 01/18/19
2nd 01/21/19

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Lab ID: KQ1818747-06
RunType: DLCS
Matrix: Water

Date Acquired: 1/5/19 11:45
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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: _____

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Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_123	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:45	**Vial:**	5
Run Type:	DLCS	**Dilution:**	1
Lab ID:	KQ1818747-06	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/17/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	KQ1818747
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	20001

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.074	+0.00	4663502	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.977	0.00	697836	3.7392	75	20 - 109	Y
18O2-PFHxS	4.369	+0.00	615908	4.7836	96	26 - 122	Y
13C4-PFOS	4.692		577274	4.2958	86	25 - 121	Y
13C4-PFBA	3.312	-0.01	2589867	4.3279	87	27 - 124	Y
13C5-PFPeA	3.921	0.00	1659471	4.9764	100	27 - 138	Y
13C2-PFHxA	4.188		5323282	4.7805	96	28 - 132	Y
13C4-PFHpA	4.370	+0.00	3734484	4.4707	89	19 - 139	Y
13C4-PFOA	4.537		4437032	3.9849	80	22 - 130	Y
13C5-PFNA	4.707	+0.00	4338986	4.6834	94	20 - 127	Y
13C2-PFDA	4.891		3613376	4.4676	89	24 - 125	Y
13C2-PFUnDA	5.075	+0.00	2966060	3.9195	78	22 - 125	Y
13C2-PFDoDA	5.254	+0.00	4150604	3.7801	76	19 - 122	Y
13C2-PFTeDA	5.577	+0.00	3009124	3.8299	77	13 - 124	Y
13C8-FOSA	5.230	+0.00	1362060	3.8094	76	18 - 109	Y
D3-MeFOSA	5.622	+0.00	419768	4.1256	83	15 - 153	Y
D5-EtFOSA	5.761	+0.00	677335	3.9701	79	25 - 107	Y
D7-MeFOSE	5.594	+0.00	631883	4.2752	86	24 - 112	Y
D9-EtFOSE	5.726	+0.00	623145	3.9065	78	19 - 109	Y
D3-MeFOSAA	4.997	+0.00	583331	4.1221	82	9 - 123	Y
D5-EtFOSAA	5.094	+0.00	611461	4.5007	90	12 - 126	Y
13C2-6:2 FTS	4.527		388785	3.3562	67	10 - 226	Y
13C2-8:2 FTS	4.889		344575	3.8249	76	10 - 202	Y

1st CM 01/18/19
2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_123	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:45	**Vial:**	5
Run Type:	DLCS	**Dilution:**	1
Lab ID:	KQ1818747-06	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.976		134805	0.9483	30.3		Y
Perfluorohexane sulfonic acid (PFHxS)	4.368		101759	0.8575	27.4		Y
Perfluoroheptane sulfonic acid (PFHpS)	4.529		117878	0.9495	30.4		Y
Perfluorooctane sulfonic acid (PFOS)	4.692	+0.00	74197	0.8715	27.9		Y
Perfluorodecane sulfonic acid (PFDS)	5.051	+0.00	102531	0.9660	30.9		Y
Perfluorobutanoic acid (PFBA)	3.312	-0.01	462810	1.0136	32.4		Y
Perfluoropentanoic acid (PFPeA)	3.921	0.00	846907	0.9627	30.8		Y
Perfluorohexanoic acid (PFHxA)	4.188	+0.00	933907	0.9931	31.8		Y
Perfluoroheptanoic acid (PFHpA)	4.370	+0.00	792669	0.9933	31.8		Y
Perfluorooctanoic acid (PFOA)	4.537		850101	1.1680	37.4		Y
Perfluorononanoic acid (PFNA)	4.707		579721	1.0059	32.2		Y
Perfluorodecanoic acid (PFDA)	4.891		605712	1.0012	32.0		Y
Perfluoroundecanoic acid (PFUnDA)	5.074	+0.00	515768	1.0759	34.4		Y
Perfluorododecanoic acid (PFDoDA)	5.254	+0.00	499061	1.1076	35.4		Y
Perfluorotridecanoic acid (PFTrDA)	5.424		586485	1.0852	34.7		Y
Perfluorotetradecanoic acid (PFTeDA)	5.577	+0.00	220642	1.0818	34.6		Y
Perfluorooctane sulfonamide (FOSA)	5.231	+0.00	350250	0.9625	30.8		Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.626	+0.00	120133	1.0838	34.7		Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.766	+0.00	24177	1.0070	32.2		Y
N-Methyl perfluorooctane sulfonamidoethanol	5.602	+0.00	177666	0.9677	31.0		Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.737	+0.00	139487	0.9203	29.4		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.998		64532	1.0553	33.8		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.098		49165	0.9005	28.8		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.527		89446	1.2451	39.8		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.888		58862	0.9691	31.0		Y

Prep Amount:	250 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 1/18/2019 10:42:01 AM

010419_123

Sample ID: KQ1818747-06
Date acquired: 1/5/2019 11:45:21 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_123.lcd
Vial: 25 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.312	2588682	2588682	2	5.0000	ng/mL	----
PFBA-13C	M	3.312	2589867	4663502	26	4.3279	ng/mL	----
PFBA	M	3.312	462810	2588682	2	1.0136	ng/mL	----
PFPeA-13C_IS	Auto	3.921	1659471	1659471	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.921	1659471	4663502	26	4.9764	ng/mL	----
PFPeA	Auto	3.921	846907	1659471	4	0.9627	ng/mL	----
PFBS_1	Auto	3.976	134805	697836	16	0.9483	ng/mL	----
PFBS-13C	Auto	3.977	697836	4663502	26	3.7392	ng/mL	----
PFBS-13C_IS	Auto	3.977	697836	697836	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.188	5323282	5323282	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.188	5323282	4663502	26	4.7805	ng/mL	----
PFHxA	Auto	4.188	933907	5323282	6	0.9931	ng/mL	----
PFHpA	Auto	4.370	792669	3734484	8	0.9933	ng/mL	----
PFHpA-13C_IS	Auto	4.370	3734484	3734484	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.370	3734484	4663502	26	4.4707	ng/mL	----
PFHxS-18O_IS	Auto	4.369	615908	615908	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.369	615908	4663502	26	4.7836	ng/mL	----
PFHxS_1	Auto	4.368	101759	615908	7	0.8575	ng/mL	----
6_2-FTS-13C	Auto	4.527	388785	4663502	26	3.3562	ng/mL	----
6_2-FTS-13C_IS	Auto	4.527	388785	388785	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.527	89446	388785	10	1.2451	ng/mL	----
PFHpS_1	Auto	4.529	117878	615908	7	0.9495	ng/mL	----
PFOA-13C_IS	Auto	4.537	4437032	4437032	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.537	4437032	4663502	26	3.9849	ng/mL	----
PFOA	Auto	4.537	850101	4437032	9	1.1680	ng/mL	----
PFOS_1	Auto	4.692	74197	577274	13	0.8715	ng/mL	----
PFOS-13C_IS	Auto	4.692	577274	577274	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.692	577274	4663502	26	4.2958	ng/mL	----
PFNA-13C_IS	Auto	4.707	4338986	4338986	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.707	4338986	4663502	26	4.6834	ng/mL	----
PFNA	Auto	4.707	579721	4338986	11	1.0059	ng/mL	----
PFDA-13C_IS	Auto	4.891	3613376	3613376	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.891	3613376	4663502	26	4.4676	ng/mL	----
PFDA	Auto	4.891	605712	3613376	12	1.0012	ng/mL	----
8_2-FTS-13C_IS	Auto	4.889	344575	344575	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.889	344575	4663502	26	3.8249	ng/mL	----
8_2-FTS_1	Auto	4.888	58862	344575	15	0.9691	ng/mL	----
PFDS_1	Auto	5.051	102531	577274	13	0.9660	ng/mL	----
PFUnA	Auto	5.074	515768	2966060	14	1.0759	ng/mL	----
PFUnA-13C_IS	Auto	5.075	2966060	2966060	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.075	2966060	4663502	26	3.9195	ng/mL	----
PFDoA	Auto	5.254	499061	4150604	17	1.1076	ng/mL	----
PFDoA-13C	Auto	5.254	4150604	4663502	26	3.7801	ng/mL	----
PFDoA-13C_IS	Auto	5.254	4150604	4150604	17	5.0000	ng/mL	----
PFTrDA	Auto	5.424	586485	3009124	22	1.0852	ng/mL	----
PFTeDA	Auto	5.577	220642	3009124	22	1.0818	ng/mL	----
PFTeDA-13C	Auto	5.577	3009124	4663502	26	3.8299	ng/mL	----
PFTeDA-13C_IS	Auto	5.577	3009124	3009124	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.230	1362060	1362060	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.230	1362060	4663502	26	3.8094	ng/mL	----
FOSA	Auto	5.231	350250	1362060	18	0.9625	ng/mL	----
N-MeFOSAA	M	4.998	64532	583331	19	1.0553	ng/mL	----
N-MeFOSAA-d3	Auto	4.997	583331	4663502	26	4.1221	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.997	583331	583331	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.622	419768	419768	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.622	419768	4663502	26	4.1256	ng/mL	----
N-MeFOSA	Auto	5.626	120133	419768	1	1.0838	ng/mL	----
N-MeFOSE-d7	Auto	5.594	631883	4663502	26	4.2752	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.594	631883	631883	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.602	177666	631883	20	0.9677	ng/mL	----
N-EtFOSAA	M	5.098	49165	611461	21	0.9005	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.094	611461	611461	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.094	611461	4663502	26	4.5007	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.761	677335	677335	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.761	677335	4663502	26	3.9701	ng/mL	----
N-EtFOSA	Auto	5.766	24177	677335	23	1.0070	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.726	623145	623145	24	5.0000	ng/mL	----

Insight Report

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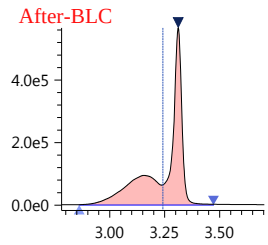
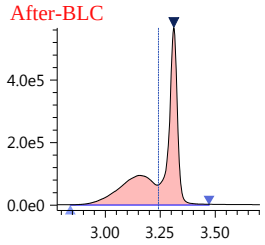
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.726	623145	4663502	26	3.9065	ng/mL	----
N-EtFOSE	Auto	5.737	139487	623145	24	0.9203	ng/mL	----
13C7-PFUnDA_IS	Auto	5.074	4663502	4663502	26	5.0000	ng/mL	----

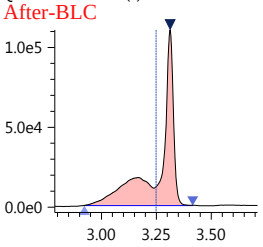
PFBA-13C_IS
Conc 5.0000
RT 3.312 Area 2588682
ISTD 216.90>172.15 (-) 5.67e5



PFBA-13C
Conc 4.3279
RT 3.312 Area 2589867
Q 216.90>172.15 (-) 5.67e5



PFBA
Conc 1.0136
RT 3.312 Area 462810
Q 213.00>169.10 (-) 1.11e5



PFPeA-13C_IS
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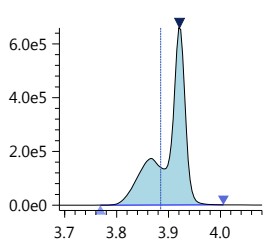
RT 3.921 Area 1659471
ISTD 267.90>223.00 (-) 6.59e5



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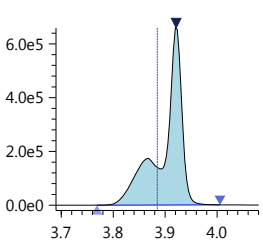
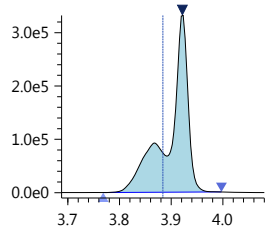
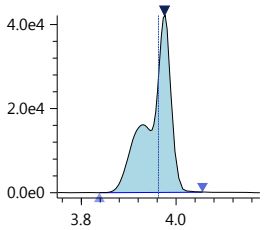


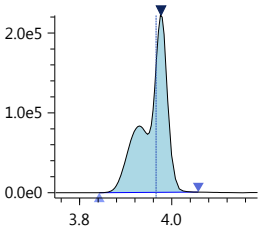
PFPeA
Conc 0.9627
RT 3.921 Area 846907
Q 263.05>219.10 (-) 3.32e5



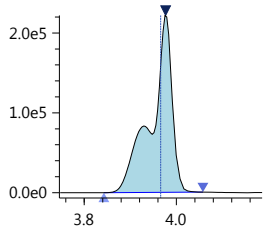
PFBS_1
Conc 0.9483
RT 3.976 Area 134805
Q 299.00>80.00 (-) 4.22e4



PFBS-13C
Conc 3.7392
RT 3.977 Area 697836
Q 301.80>80.00 (-) 2.22e5



PFBS-13C_IS
Conc 5.0000
RT 3.977 Area 697836
ISTD 301.80>80.00 (-) 2.22e5



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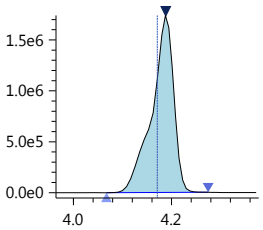
Conc 5.0000
RT 4.188 Area 5323282
ISTD 314.90>270.10 (-) 1.74e6



PFHxA-13C
Conc 4.7805
RT 4.188 Area 5323282
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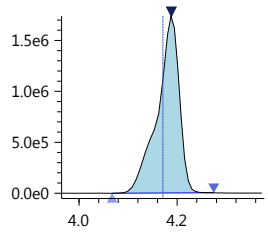
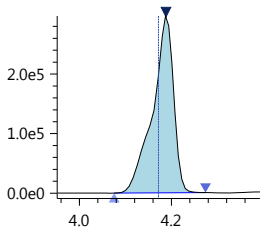
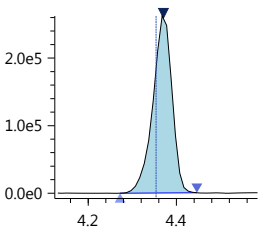


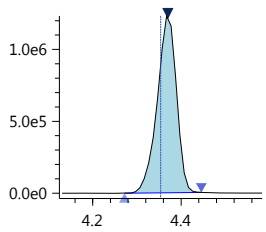
PFHxA
Conc 0.9931
RT 4.188 Area 933907
Q 313.00>269.00 (-) 2.98e5



PFHpA
Conc 0.9933
RT 4.370 Area 792669
Q 362.90>319.00 (-) 2.62e5



PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 3734484
ISTD 366.90>322.10 (-) 1.23e6



PFHpA-13C
Conc 4.4707
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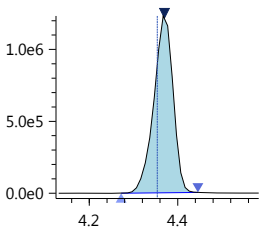
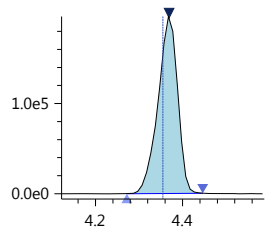
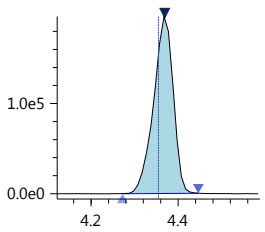
Q 366.90>322.10 (-) 1.23e6



PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 615908
ISTD 402.70>84.05 (-) 1.97e5



PFHxS-18O
Conc 4.7836
RT 4.369 Area 615908
Q 402.70>84.05 (-) 1.97e5



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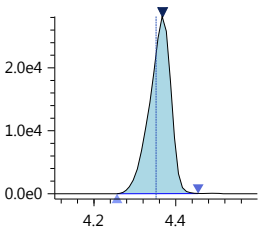
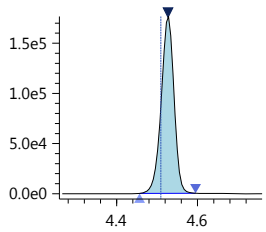
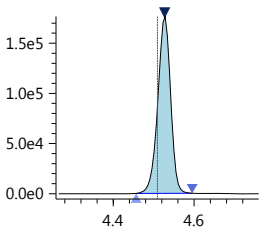
Conc 0.8575
RT 4.368 Area 101759
Q 399.00>80.00 (-) 2.82e4



6_2-FTS-13C
Conc 3.3562
RT 4.527 Area 388785
Q 428.90>409.00 (-) 1.77e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 388785
ISTD 428.90>409.00 (-) 1.77e5



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6_2-FTS_1
Conc 1.2451
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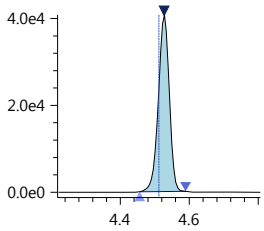
Q 427.00>407.00 (-) 4.08e4



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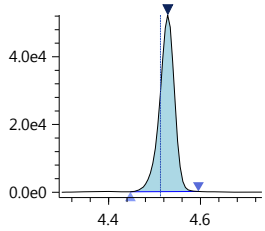
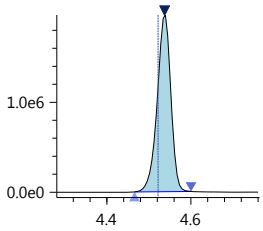
Conc 0.9495
RT 4.529 Area 117878
Q 449.00>80.15 (-) 5.23e4



PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 4437032
ISTD 416.80>372.05 (-) 1.97e6



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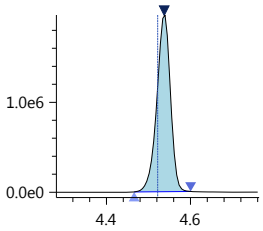
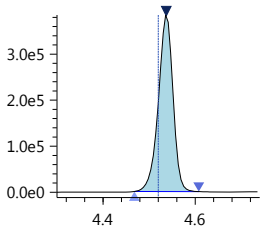
RT 4.537 Area 4437032
Q 416.80>372.05 (-) 1.97e6



PFOA
Conc 1.1680
RT 4.537 Area 850101
Q 413.00>369.00 (-) 3.85e5



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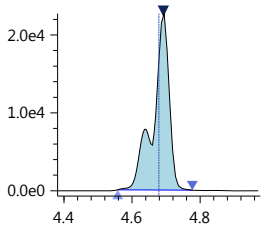
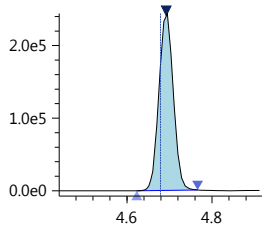
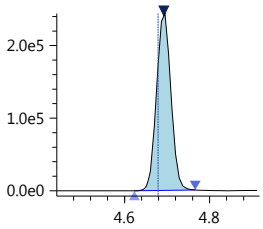
Conc 0.8715
RT 4.692 Area 74197
Q 499.00>80.00 (-) 2.28e4



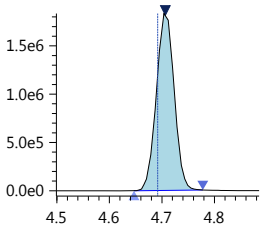
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 577274
ISTD 502.80>80.05 (-) 2.44e5



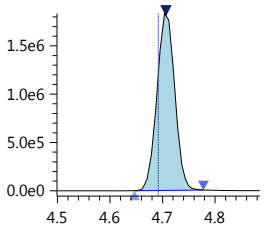
PFOS-13C
Conc 4.2958
RT 4.692 Area 577274
Q 502.80>80.05 (-) 2.44e5



PFNA-13C_IS
Conc 5.0000
RT 4.707 Area 4338986
ISTD 467.80>423.00 (-) 1.84e6



PFNA-13C
Conc 4.6834
RT 4.707 Area 4338986
Q 467.80>423.00 (-) 1.84e6



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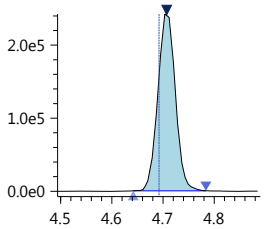
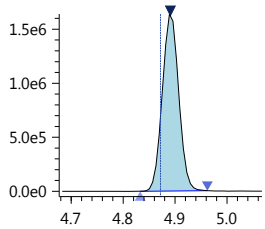
Conc 1.0059
RT 4.707 Area 579721
Q 463.00>418.90 (-) 2.43e5



PFDA-13C_IS
Conc 5.0000
RT 4.891 Area 3613376
ISTD 514.80>469.95 (-) 1.64e6



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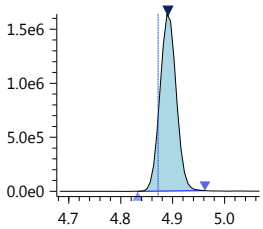
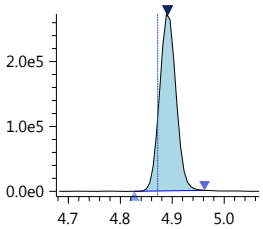
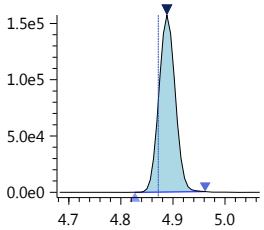
RT 4.891 Area 3613376
Q 514.80>469.95 (-) 1.64e6



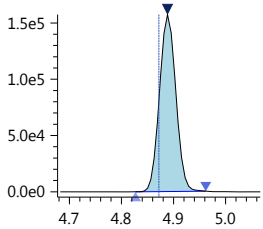
PFDA
Conc 1.0012
RT 4.891 Area 605712
Q 513.00>468.80 (-) 2.73e5



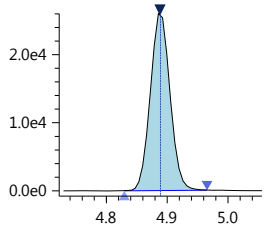
8_2-FTS-13C_IS
Conc 5.0000
RT 4.889 Area 344575
ISTD 528.80>509.00 (-) 1.57e5



8_2-FTS-13C
Conc 3.8249
RT 4.889 Area 344575
Q 528.80>509.00 (-) 1.57e5



8_2-FTS_1
Conc 0.9691
RT 4.888 Area 58862
Q 527.10>506.90 (-) 2.60e4



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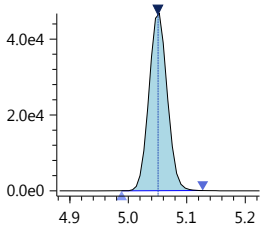
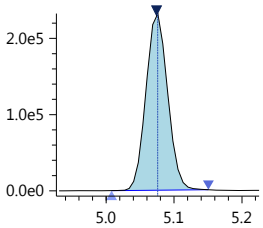
Conc 0.9660
RT 5.051 Area 102531
Q 599.00>79.90 (-) 4.67e4



PFUnA
Conc 1.0759
RT 5.074 Area 515768
Q 563.00>518.90 (-) 2.33e5



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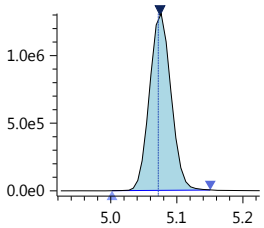
Conc 5.0000
RT 5.075 Area 2966060
ISTD 564.80>519.95 (-) 1.31e6



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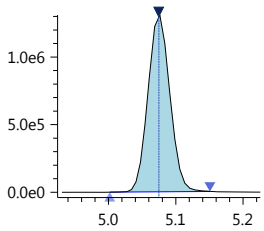
PFUnA-13C
Conc 3.9195
RT 5.075 Area 2966060
Q 564.80>519.95 (-) 1.31e6



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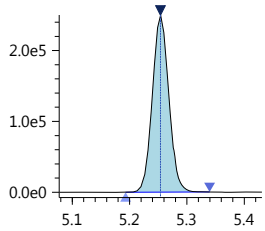
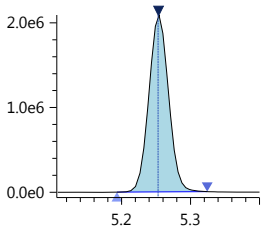
Conc 1.1076
RT 5.254 Area 499061
Q 613.05>569.00 (-) 2.50e5



PFDoA-13C
Conc 3.7801
RT 5.254 Area 4150604
Q 614.80>569.95 (-) 2.09e6



PFDoA-13C_IS
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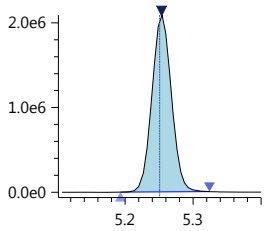
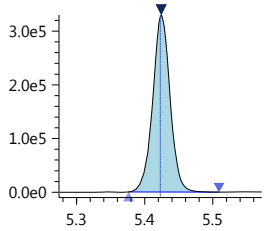
RT 5.254 Area 4150604
ISTD 614.80>569.95 (-) 2.09e6



PFTrDA
Conc 1.0852
RT 5.424 Area 586485
Q 663.00>618.90 (-) 3.30e5



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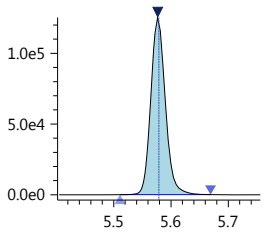
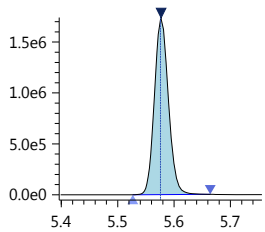
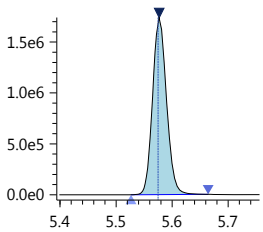
Conc 1.0818
RT 5.577 Area 220642
Q 713.40>669.00 (-) 1.25e5



PFTeDA-13C
Conc 3.8299
RT 5.577 Area 3009124
Q 714.70>669.90 (-) 1.74e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.577 Area 3009124
ISTD 714.70>669.90 (-) 1.74e6



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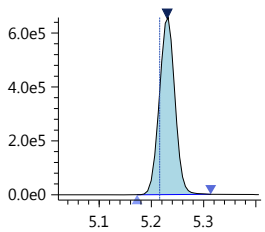
Conc 5.0000
RT 5.230 Area 1362060
ISTD 506.00>78.05 (-) 6.58e5



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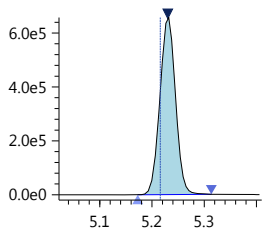
Q 506.00>78.05 (-) 6.58e5



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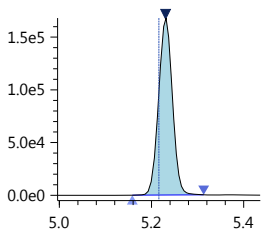
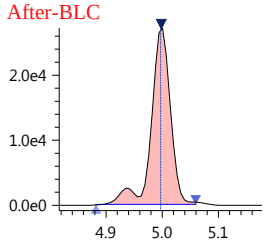
RT 5.231 Area 350250
Q 498.20>78.00 (-) 1.68e5



N-MeFOSAA
Conc 1.0553
RT 4.998 Area 64532
Q 570.20>419.00 (-) 2.73e4
After-BLC



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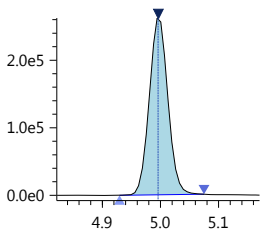
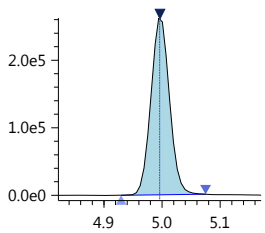
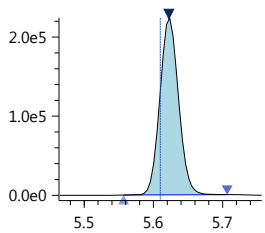
Conc 4.1221
RT 4.997 Area 583331
Q 572.80>419.05 (-) 2.62e5



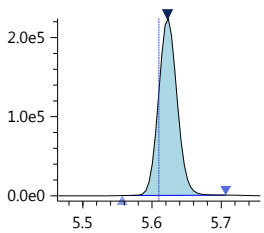
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.997 Area 583331
ISTD 572.80>419.05 (-) 2.62e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 419768
ISTD 514.90>168.90 (-) 2.24e5



N-MeFOSA-d3
Conc 4.1256
RT 5.622 Area 419768
Q 514.90>168.90 (-) 2.24e5



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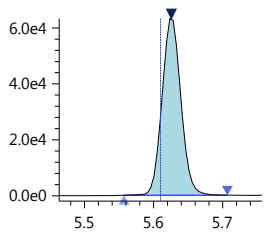
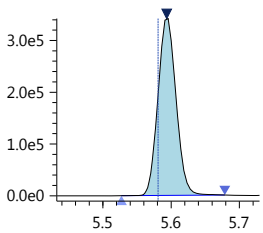
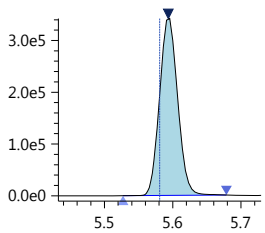
Conc 1.0838
RT 5.626 Area 120133
Q 512.00>169.10 (-) 6.34e4



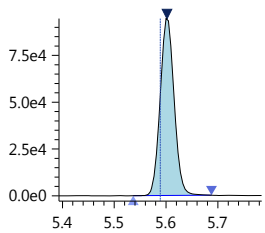
N-MeFOSE-d7
Conc 4.2752
RT 5.594 Area 631883
Q 622.70>59.10 (-) 3.42e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.594 Area 631883
ISTD 622.70>59.10 (-) 3.42e5



N-MeFOSE
Conc 0.9677
RT 5.602 Area 177666
Q 616.00>59.00 (-) 9.47e4



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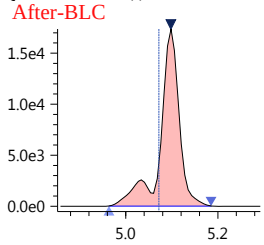
N-EtFOSAA
Conc 0.9005
RT 5.098 Area 49165
Q 584.20>418.95 (-) 1.74e4
After-BLC



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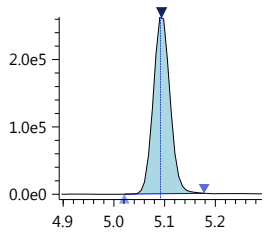
Conc 5.0000
RT 5.094 Area 611461
ISTD 588.80>419.00 (-) 2.63e5



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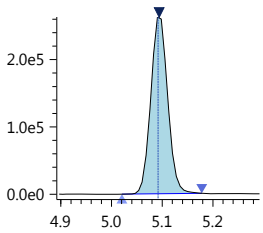
RT 5.094 Area 611461
Q 588.80>419.00 (-) 2.63e5



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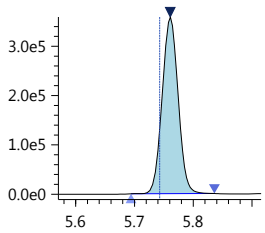
RT 5.761 Area 677335
ISTD 530.90>169.15 (-) 3.59e5



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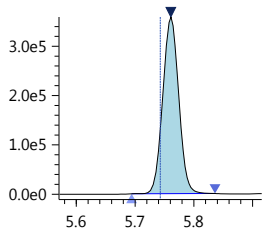
Q 530.90>169.15 (-) 3.59e5



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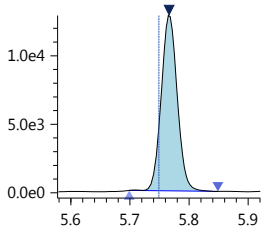
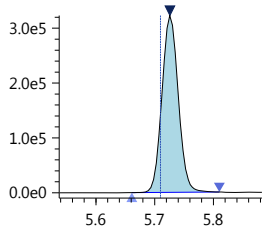
Conc 1.0070
RT 5.766 Area 24177
Q 526.90>169.10 (-) 1.29e4



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.726 Area 623145
ISTD 638.70>59.10 (-) 3.23e5



N-EtFOSE-d9
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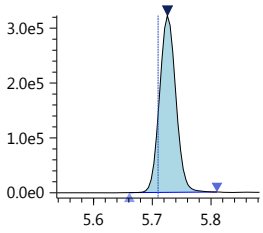

N-EtFOSE
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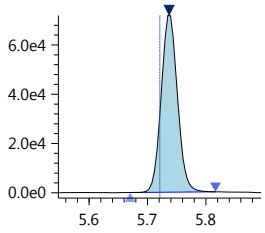
Q 630.00>58.90 (-) 7.20e4



13C7-PFUnDA_IS
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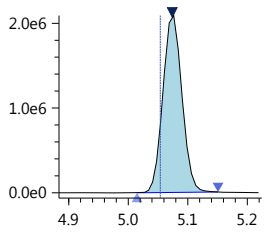
RT 5.074 Area 4663502
ISTD 570.00>525.00 (-) 2.09e6



Insight Report

Printed at 1/18/2019 8:51:07 AM

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Date acquired: 1/5/2019 11:45:21 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_123.lcd
Vial: 25 | Inj. Volume: 15.0000uL | Tray: 4

PFBA-13C_IS
Conc 5.0000
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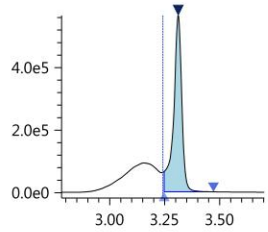
ISTD 216.90>172.15 (-) 5.67e5



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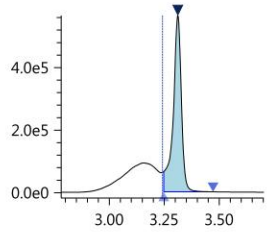

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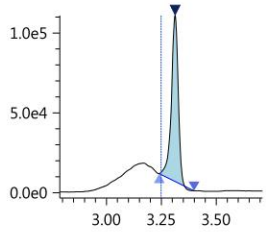
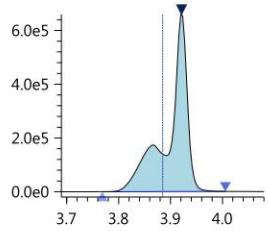


PFPeA-13C_IS
Conc 5.0000
RT 3.921 Area 1659471
ISTD 267.90>223.00 (-) 6.59e5



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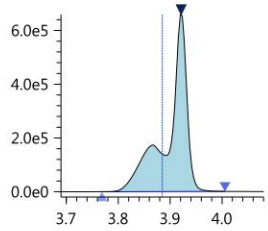
Q 267.90>223.00 (-) 6.59e5



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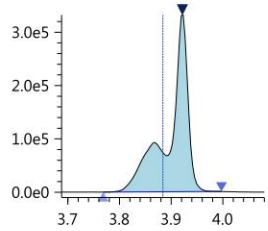
Q 263.05>219.10 (-) 3.32e5



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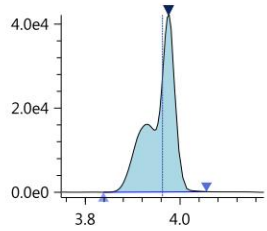
Conc 0.9483
RT 3.976 Area 134805
Q 299.00>80.00 (-) 4.22e4



PFBS-13C
Conc 3.7392
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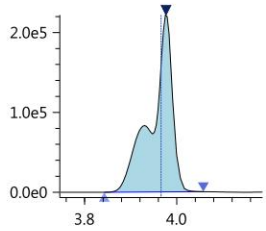
Q 301.80>80.00 (-) 2.22e5



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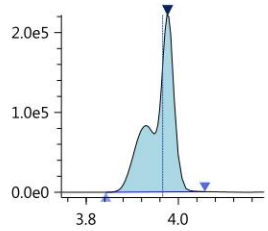

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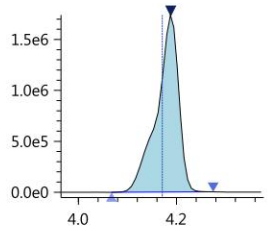

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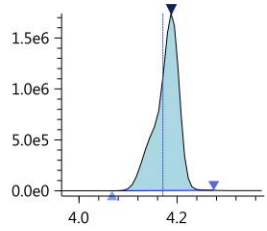
Q 314.90>270.10 (-) 1.74e6



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Conc 0.9931
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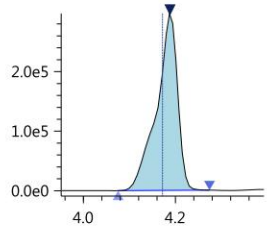
Q 313.00>269.00 (-) 2.98e5



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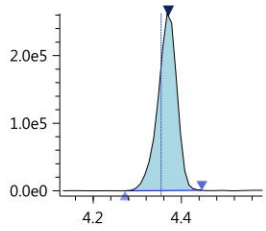
Conc 0.9933
RT 4.370 Area 792669
Q 362.90>319.00 (-) 2.62e5



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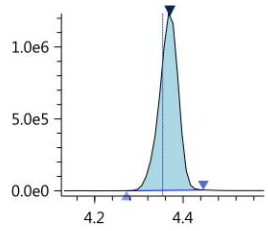
RT 4.370 Area 3734484
ISTD 366.90>322.10 (-) 1.23e6



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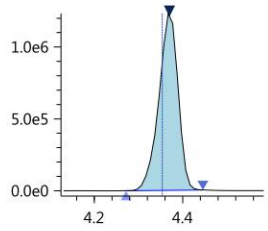
Q 366.90>322.10 (-) 1.23e6



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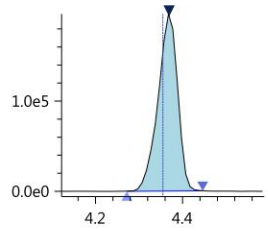
RT 4.369 Area 615908
ISTD 402.70>84.05 (-) 1.97e5



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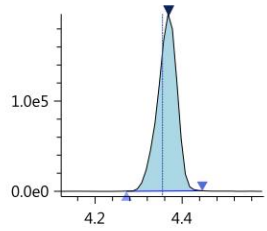

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Conc 0.8575
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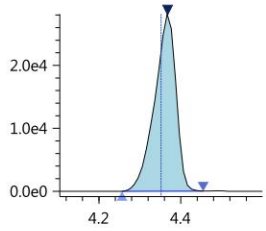
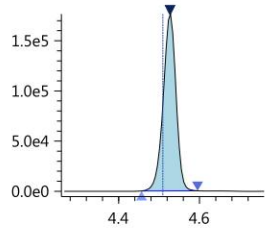
Q 399.00>80.00 (-) 2.82e4



6_2-FTS-13C
Conc 3.3562
RT 4.527 Area 388785
Q 428.90>409.00 (-) 1.77e5



6_2-FTS-13C_IS
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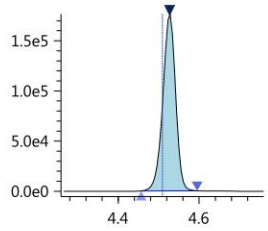

Insight Report

Printed at 1/18/2019 8:51:07 AM

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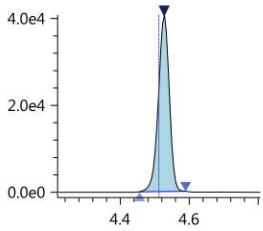
Q 427.00>407.00 (-) 4.08e4



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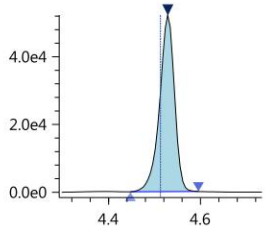

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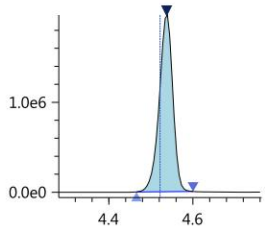

PFOA-13C
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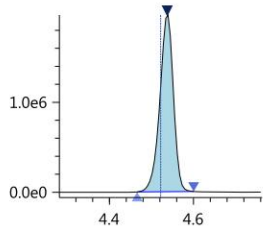
Q 416.80>372.05 (-) 1.97e6



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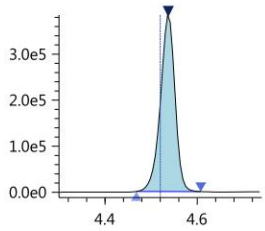

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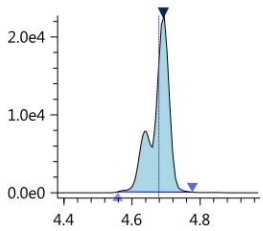
Conc 0.8715
RT 4.692 Area 74197
Q 499.00>80.00 (-) 2.28e4



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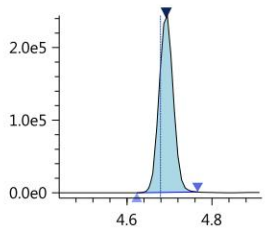

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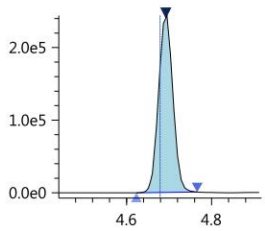

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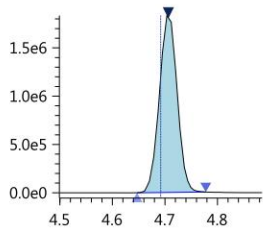
Conc 5.0000
RT 4.707 Area 4338986
ISTD 467.80>423.00 (-) 1.84e6



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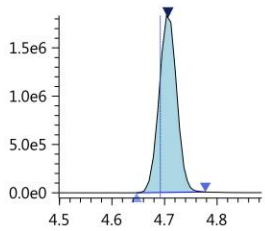

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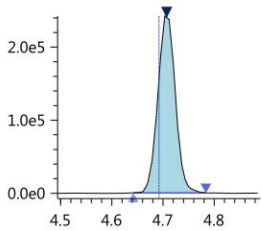
Conc 1.0059
RT 4.707 Area 579721
Q 463.00>418.90 (-) 2.43e5



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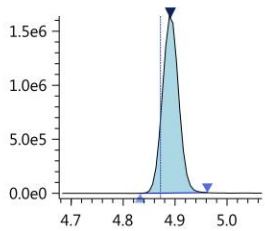

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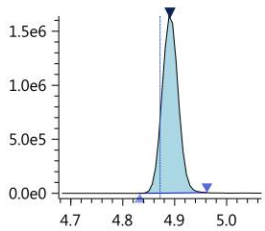

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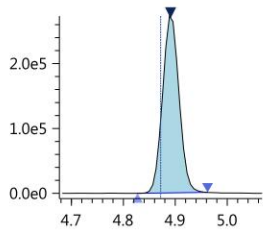
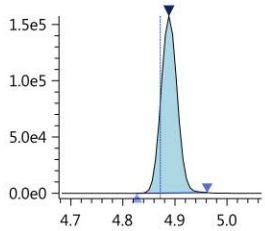
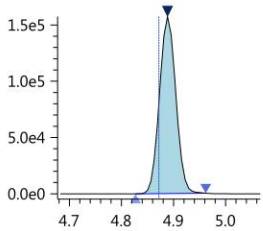
Q 513.00>468.80 (-) 2.73e5



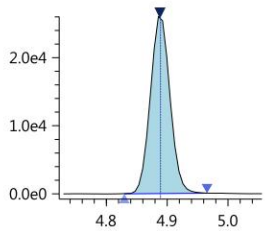
8_2-FTS-13C_IS
Conc 5.0000
RT 4.889 Area 344575
ISTD 528.80>509.00 (-) 1.57e5



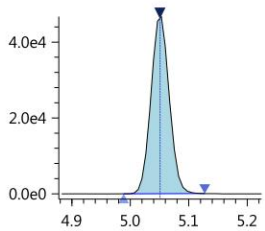
8_2-FTS-13C
Conc 3.8249
RT 4.889 Area 344575
Q 528.80>509.00 (-) 1.57e5



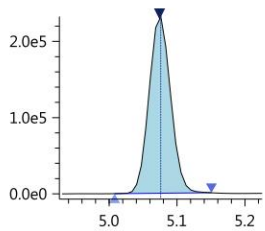
8_2-FTS_1
Conc 0.9691
RT 4.888 Area 58862
Q 527.10>506.90 (-) 2.60e4



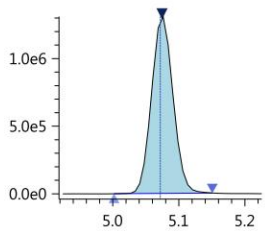
PFDS_1
Conc 0.9660
RT 5.051 Area 102531
Q 599.00>79.90 (-) 4.67e4



PFUnA
Conc 1.0759
RT 5.074 Area 515768
Q 563.00>518.90 (-) 2.33e5



PFUnA-13C_IS
Conc 5.0000
RT 5.075 Area 2966060
ISTD 564.80>519.95 (-) 1.31e6



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PFUnA-13C
Conc 3.9195
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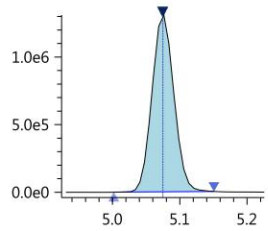
Q 564.80>519.95 (-) 1.31e6



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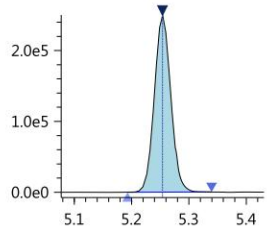
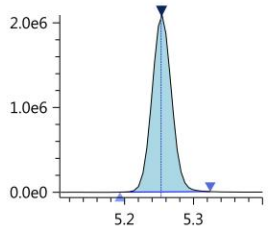
Conc 1.1076
RT 5.254 Area 499061
Q 613.05>569.00 (-) 2.50e5



PFDoA-13C
Conc 3.7801
RT 5.254 Area 4150604
Q 614.80>569.95 (-) 2.09e6



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Conc 5.0000
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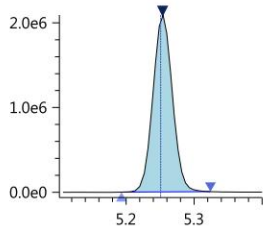
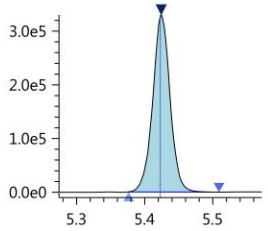
ISTD 614.80>569.95 (-) 2.09e6



PFTrDA
Conc 1.0852
RT 5.424 Area 586485
Q 663.00>618.90 (-) 3.30e5



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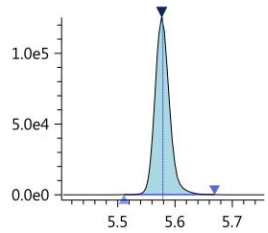
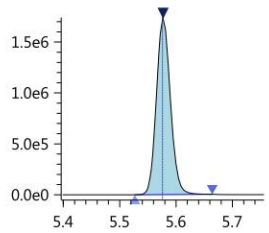
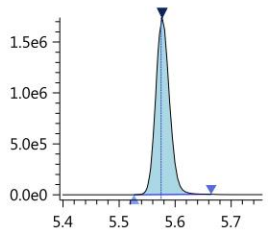
Conc 1.0818
RT 5.577 Area 220642
Q 713.40>669.00 (-) 1.25e5



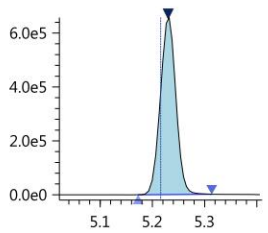
PFTeDA-13C
Conc 3.8299
RT 5.577 Area 3009124
Q 714.70>669.90 (-) 1.74e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.577 Area 3009124
ISTD 714.70>669.90 (-) 1.74e6



FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1362060
ISTD 506.00>78.05 (-) 6.58e5



FOSA-13C
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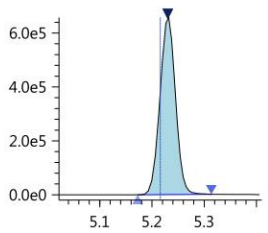
Q 506.00>78.05 (-) 6.58e5



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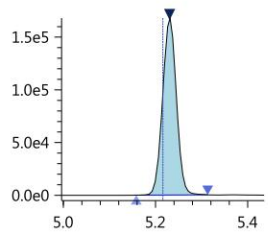
Conc 0.9625
RT 5.231 Area 350250
Q 498.20>78.00 (-) 1.68e5



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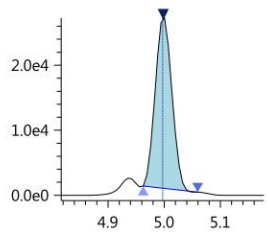
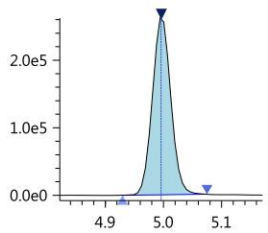
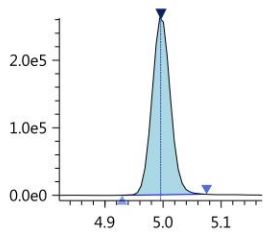
Conc 0.8918
RT 4.998 Area 54531
Q 570.20>419.00 (-) 2.73e4



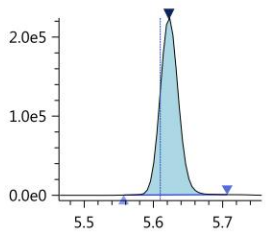
N-MeFOSAA-d3
Conc 4.1221
RT 4.997 Area 583331
Q 572.80>419.05 (-) 2.62e5



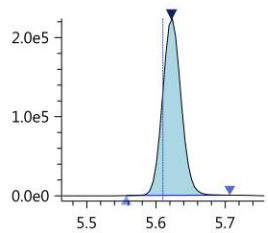
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.997 Area 583331
ISTD 572.80>419.05 (-) 2.62e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 419768
ISTD 514.90>168.90 (-) 2.24e5



N-MeFOSA-d3
Conc 4.1256
RT 5.622 Area 419768
Q 514.90>168.90 (-) 2.24e5



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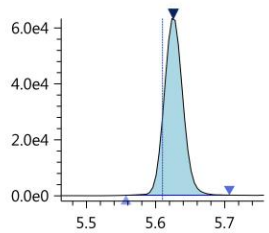
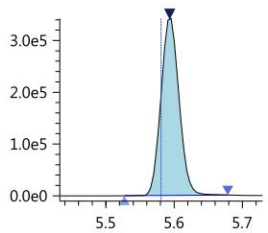
Conc 1.0838
RT 5.626 Area 120133
Q 512.00>169.10 (-) 6.34e4



N-MeFOSE-d7
Conc 4.2752
RT 5.594 Area 631883
Q 622.70>59.10 (-) 3.42e5



N-MeFOSE-d7_IS
Conc 5.0000
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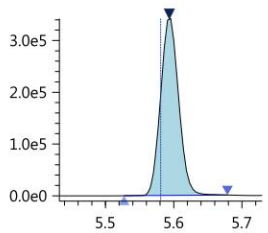
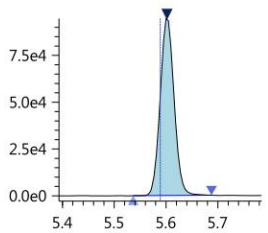
ISTD 622.70>59.10 (-) 3.42e5



N-MeFOSE
Conc 0.9677
RT 5.602 Area 177666
Q 616.00>59.00 (-) 9.47e4



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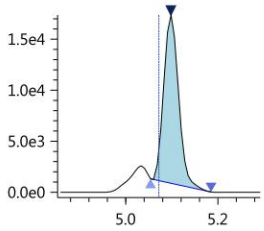
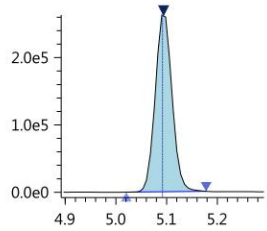
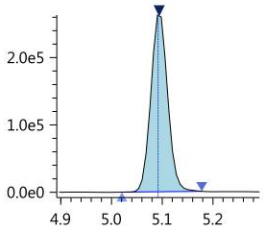
N-EtFOSAA
Conc 0.6858
RT 5.098 Area 37055
Q 584.20>418.95 (-) 1.74e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.094 Area 611461
ISTD 588.80>419.00 (-) 2.63e5



N-EtFOSAA-d5
Conc 4.5007
RT 5.094 Area 611461
Q 588.80>419.00 (-) 2.63e5



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Conc 5.0000
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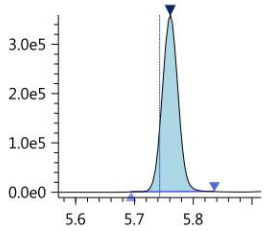
ISTD 530.90>169.15 (-) 3.59e5



N-EtFOSA-d9
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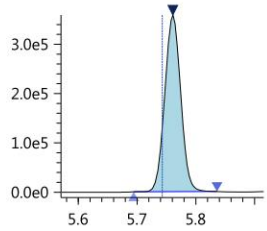
Q 530.90>169.15 (-) 3.59e5



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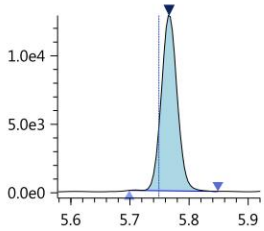
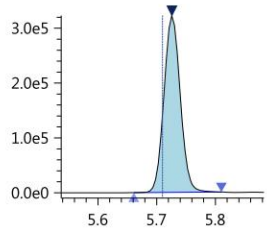
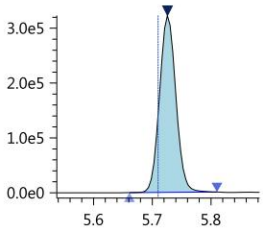
Conc 1.0070
RT 5.766 Area 24177
Q 526.90>169.10 (-) 1.29e4



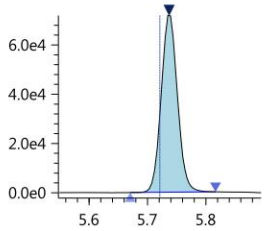
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.726 Area 623145
ISTD 638.70>59.10 (-) 3.23e5



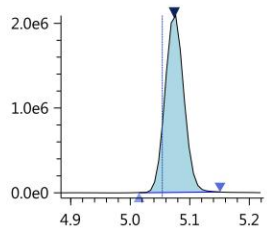
N-EtFOSE-d9
Conc 3.9065
RT 5.726 Area 623145
Q 638.70>59.10 (-) 3.23e5



N-EtFOSE
Conc 0.9203
RT 5.737 Area 139487
Q 630.00>58.90 (-) 7.20e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.074 Area 4663502
ISTD 570.00>525.00 (-) 2.09e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_052
Lab ID: KQ1818316-01
RunType: MS
Matrix: Soil

Date Acquired: 12/21/18 04:01
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	13C2-6:2 FTS	58	70	130	Native ok
	D5-EtFOSAA	184	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D3-MeFOSAA	174	70	130	Native ok
Surrogates	D3-MeFOSAA	155	20	154	Native ok
	D5-EtFOSAA	159	29	153	Native ok

Primary Review: _____

Printed: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_052	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 04:01	**Vial:**	7
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818316-01	**Raw Units:**	ng/mL

Bottle ID:	K1812302-002.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**	328407	**Report Group:**	KQ1818316
Analysis	PFC/537M	**Prep Method:**	EPA 3550B		
		Prep Date:	12/17/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.060		6460521	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.968	0.00	1164849	4.2748	85		33 - 109	Y
18O2-PFHxS	4.357	0.00	742654	4.5513	91		36 - 120	Y
13C4-PFOS	4.680	0.00	735250	4.4268	89		32 - 130	Y
13C4-PFBA	3.295	-0.02	3654244	4.5451	91		34 - 116	Y
13C5-PFPeA	3.911	0.00	2098909	5.2100	104		39 - 133	Y
13C2-PFHxA	4.176	0.00	6490209	4.5832	92		32 - 136	Y
13C4-PFHpA	4.356	0.00	4853521	4.7010	94		36 - 133	Y
13C4-PFOA	4.526	0.00	6976272	4.2499	85		31 - 134	Y
13C5-PFNA	4.694	0.00	4537128	4.2384	85		27 - 133	Y
13C2-PFDA	4.878		4310303	4.3864	88		30 - 137	Y
13C2-PFUnDA	5.061	+0.00	5074272	4.5159	90		32 - 146	Y
13C2-PFDoDA	5.240	+0.00	7514941	4.6477	93		36 - 136	Y
13C2-PFTeDA	5.563		6781186	5.6895	114		39 - 138	Y
13C8-FOSA	5.218	+0.00	1874243	4.7861	96		40 - 132	Y
D3-MeFOSAA	4.983		1040925	7.7589	155	*	20 - 154	Y
D5-EtFOSAA	5.080	+0.00	1109582	7.9634	159	*	29 - 153	Y
13C2-6:2 FTS	4.517	0.00	556197	2.6690	53		30 - 140	Y
13C2-8:2 FTS	4.876	0.00	398468	2.8352	57		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.966	0.00	179238	0.8681	6.85		Y
Perfluorohexane sulfonic acid (PFHxS)	4.353	-0.01	127859	0.8290	6.54		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 CM 01/14/19

2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_052	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 04:01	**Vial:**	7
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818316-01	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.518	0.00	133245	0.9041	7.13		Y
Perfluorooctane sulfonic acid (PFOS)	4.680	0.00	93453	0.9032	7.13		Y
Perfluorodecane sulfonic acid (PFDS)	5.037	0.00	146857	0.9773	7.71		Y
Perfluorobutanoic acid (PFBA)	3.296	-0.02	624890	1.0074	7.95		Y
Perfluoropentanoic acid (PFPeA)	3.912	0.00	1149346	0.9030	7.13		Y
Perfluorohexanoic acid (PFHxA)	4.176	0.00	1101536	0.9403	7.42		Y
Perfluoroheptanoic acid (PFHpA)	4.356	0.00	1226876	0.9337	7.37		Y
Perfluorooctanoic acid (PFOA)	4.526	0.00	1066301	1.0040	7.92		Y
Perfluorononanoic acid (PFNA)	4.695	+0.00	717927	0.9558	7.54		Y
Perfluorodecanoic acid (PFDA)	4.878		717234	0.9897	7.81		Y
Perfluoroundecanoic acid (PFUnDA)	5.061	+0.00	749527	0.9543	7.53		Y
Perfluorododecanoic acid (PFDoDA)	5.240	+0.00	841279	1.0239	8.08		Y
Perfluorotridecanoic acid (PFTrDA)	5.408		1156100	0.8329	6.57		Y
Perfluorotetradecanoic acid (PFTeDA)	5.563		464641	0.9407	7.42		Y
Perfluorooctane sulfonamide (FOSA)	5.218	+0.00	536281	0.9081	7.17		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.985	0.00	108317	0.9800	7.73		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.084	+0.00	90569	1.0219	8.06		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.517		79242	0.9438	7.45		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.876		65188	0.9102	7.18		Y

Prep Amount:	1.065 g	**Dilution:**	1
Prep Final Amount:	8.00 mL	**Basis Factor:**	95.20

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

Insight Report

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122018_052

Sample ID: KQ1818316-01
Date acquired: 12/21/2018 4:01:06 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_052.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.295	3638138	3638138	2	5.0000	ng/mL	----
PFBA-13C	M	3.295	3654244	6460521	26	4.5451	ng/mL	----
PFBA	M	3.296	624890	3638138	2	1.0074	ng/mL	----
PFPeA-13C_IS	Auto	3.911	2098909	2098909	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.911	2098909	6460521	26	5.2100	ng/mL	----
PFPeA	Auto	3.912	1149346	2098909	4	0.9030	ng/mL	----
PFBS_1	Auto	3.966	179238	1164849	16	0.8681	ng/mL	----
PFBS-13C	Auto	3.968	1164849	6460521	26	4.2748	ng/mL	----
PFBS-13C_IS	Auto	3.968	1164849	1164849	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.176	6490209	6490209	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.176	6490209	6460521	26	4.5832	ng/mL	----
PFHxA	Auto	4.176	1101536	6490209	6	0.9403	ng/mL	----
PFHpA	Auto	4.356	1226876	4853521	8	0.9337	ng/mL	----
PFHpA-13C_IS	Auto	4.356	4853521	4853521	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.356	4853521	6460521	26	4.7010	ng/mL	----
PFHxS-18O_IS	Auto	4.357	742654	742654	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.357	742654	6460521	26	4.5513	ng/mL	----
PFHxS_1	Auto	4.353	127859	742654	7	0.8290	ng/mL	----
6_2-FTS-13C	Auto	4.517	556197	6460521	26	2.6690	ng/mL	----
6_2-FTS-13C_IS	Auto	4.517	556197	556197	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.517	79242	556197	10	0.9438	ng/mL	----
PFHpS_1	Auto	4.518	133245	742654	7	0.9041	ng/mL	----
PFOA-13C_IS	Auto	4.526	6976272	6976272	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.526	6976272	6460521	26	4.2499	ng/mL	----
PFOA	Auto	4.526	1066301	6976272	9	1.0040	ng/mL	----
PFOS_1	Auto	4.680	93453	735250	13	0.9032	ng/mL	----
PFOS-13C_IS	Auto	4.680	735250	735250	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.680	735250	6460521	26	4.4268	ng/mL	----
PFNA-13C_IS	Auto	4.694	4537128	4537128	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.694	4537128	6460521	26	4.2384	ng/mL	----
PFNA	Auto	4.695	717927	4537128	11	0.9558	ng/mL	----
PFDA-13C_IS	Auto	4.878	4310303	4310303	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.878	4310303	6460521	26	4.3864	ng/mL	----
PFDA	Auto	4.878	717234	4310303	12	0.9897	ng/mL	----
8_2-FTS-13C_IS	Auto	4.876	398468	398468	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.876	398468	6460521	26	2.8352	ng/mL	----
8_2-FTS_1	Auto	4.876	65188	398468	15	0.9102	ng/mL	----
PFDS_1	Auto	5.037	146857	735250	13	0.9773	ng/mL	----
PFUnA	Auto	5.061	749527	5074272	14	0.9543	ng/mL	----
PFUnA-13C_IS	Auto	5.061	5074272	5074272	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.061	5074272	6460521	26	4.5159	ng/mL	----
PFDoA	Auto	5.240	841279	7514941	17	1.0239	ng/mL	----
PFDoA-13C	Auto	5.240	7514941	6460521	26	4.6477	ng/mL	----
PFDoA-13C_IS	Auto	5.240	7514941	7514941	17	5.0000	ng/mL	----
PFTrDA	Auto	5.408	1156100	6781186	22	0.8329	ng/mL	----
PFTeDA	Auto	5.563	464641	6781186	22	0.9407	ng/mL	----
PFTeDA-13C	Auto	5.563	6781186	6460521	26	5.6895	ng/mL	----
PFTeDA-13C_IS	Auto	5.563	6781186	6781186	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.218	1874243	1874243	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.218	1874243	6460521	26	4.7861	ng/mL	----
FOSA	Auto	5.218	536281	1874243	18	0.9081	ng/mL	----
N-MeFOSAA	Auto	4.985	108317	1040925	19	0.9800	ng/mL	----
N-MeFOSAA-d3	Auto	4.983	1040925	6460521	26	7.7589	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.983	1040925	1040925	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.084	90569	1109582	21	1.0219	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.080	1109582	1109582	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.080	1109582	6460521	26	7.9634	ng/mL	----
13C7-PFUnDA_IS	Auto	5.060	6460521	6460521	26	5.0000	ng/mL	----

Insight Report

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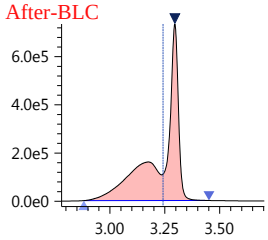
PFBA-13C_IS
Conc 5.0000
RT 3.295 Area 3638138
ISTD 216.90>172.15 (-) 7.36e5
After-BLC



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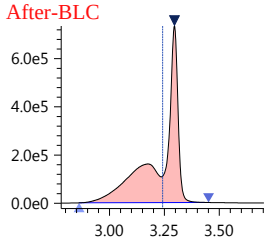
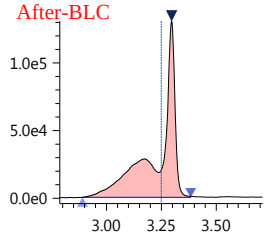
Conc 4.5451
RT 3.295 Area 3654244
Q 216.90>172.15 (-) 7.36e5
After-BLC



PFBA
Conc 1.0074
RT 3.296 Area 624890
Q 213.00>169.10 (-) 1.31e5
After-BLC



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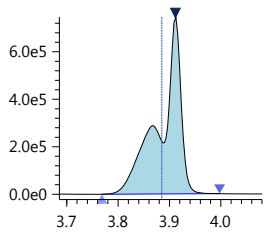
ISTD 267.90>223.00 (-) 7.47e5



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Conc 5.2100
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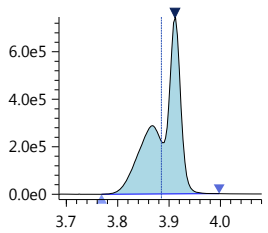
Q 267.90>223.00 (-) 7.47e5



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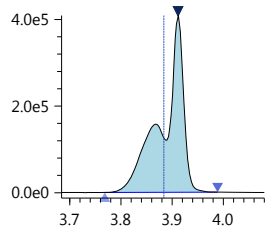
Q 263.05>219.10 (-) 4.09e5



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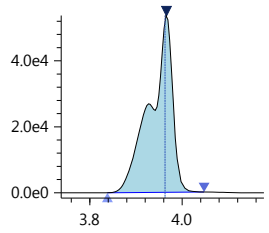
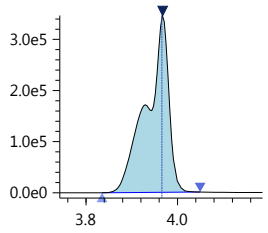
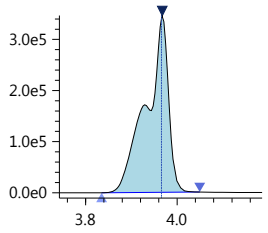
Conc 0.8681
RT 3.966 Area 179238
Q 299.00>80.00 (-) 5.37e4



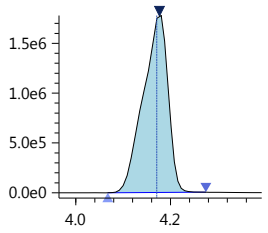
PFBS-13C
Conc 4.2748
RT 3.968 Area 1164849
Q 301.80>80.00 (-) 3.47e5



PFBS-13C_IS
Conc 5.0000
RT 3.968 Area 1164849
ISTD 301.80>80.00 (-) 3.47e5



PFHxA-13C_IS
Conc 5.0000
RT 4.176 Area 6490209
ISTD 314.90>270.10 (-) 1.78e6



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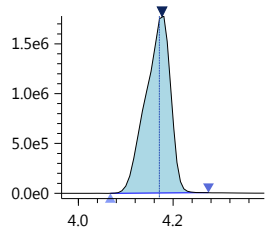

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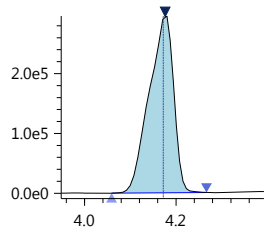

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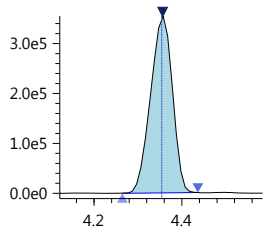
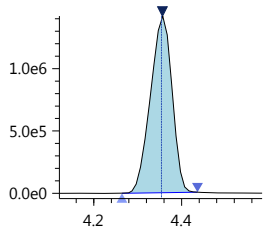
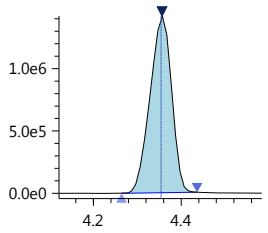
Q 362.90>319.00 (-) 3.55e5



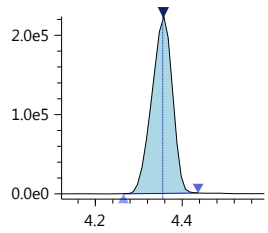
PFHpA-13C_IS
Conc 5.0000
RT 4.356 Area 4853521
ISTD 366.90>322.10 (-) 1.42e6



PFHpA-13C
Conc 4.7010
RT 4.356 Area 4853521
Q 366.90>322.10 (-) 1.42e6



PFHxS-18O_IS
Conc 5.0000
RT 4.357 Area 742654
ISTD 402.70>84.05 (-) 2.24e5



PFHxS-18O
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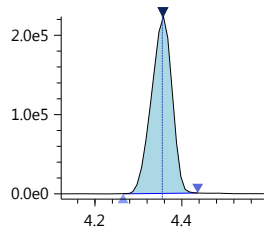
Q 402.70>84.05 (-) 2.24e5



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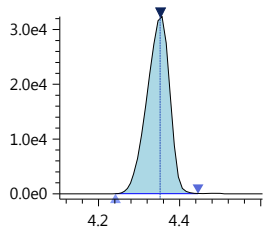
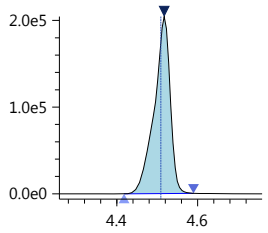
Conc 0.8290
RT 4.353 Area 127859
Q 399.00>80.00 (-) 3.24e4



6_2-FTS-13C
Conc 2.6690
RT 4.517 Area 556197
Q 428.90>409.00 (-) 2.05e5



6_2-FTS-13C_IS
Conc 5.0000
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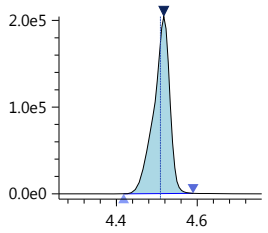

Insight Report

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6_2-FTS_1
Conc 0.9438
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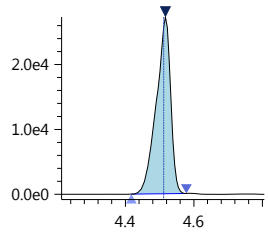
Q 427.00>407.00 (-) 2.73e4



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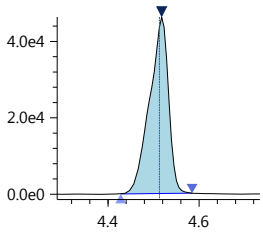
Q 449.00>80.15 (-) 4.64e4



PFOA-13C_IS
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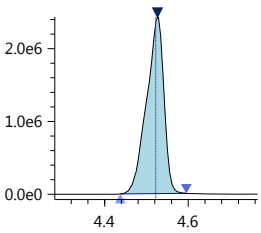
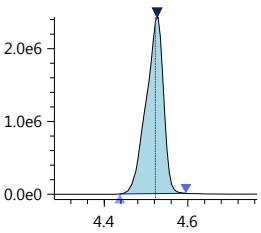
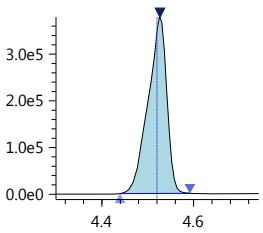
ISTD 416.80>372.05 (-) 2.44e6



PFOA-13C
Conc 4.2499
RT 4.526 Area 6976272
Q 416.80>372.05 (-) 2.44e6



PFOA
Conc 1.0040
RT 4.526 Area 1066301
Q 413.00>369.00 (-) 3.80e5



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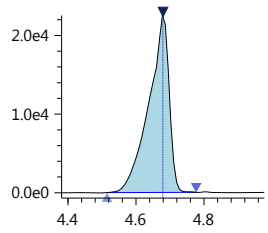
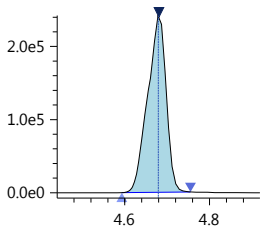
RT 4.680 Area 93453
Q 499.00>80.00 (-) 2.25e4



PFOS-13C_IS
Conc 5.0000
RT 4.680 Area 735250
ISTD 502.80>80.05 (-) 2.42e5



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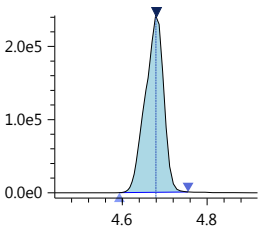
RT 4.680 Area 735250
Q 502.80>80.05 (-) 2.42e5



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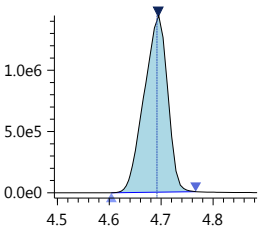
Conc 5.0000
RT 4.694 Area 4537128
ISTD 467.80>423.00 (-) 1.45e6



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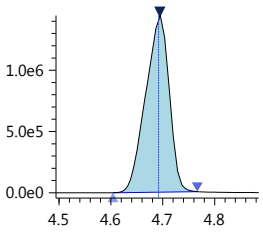
Q 467.80>423.00 (-) 1.45e6



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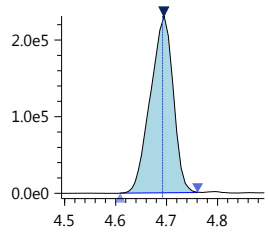
Q 463.00>418.90 (-) 2.31e5



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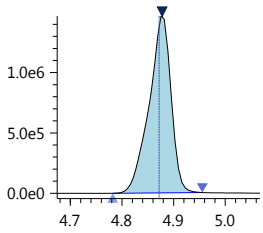
RT 4.878 Area 4310303
ISTD 514.80>469.95 (-) 1.47e6



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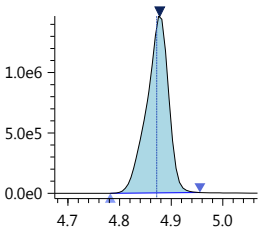

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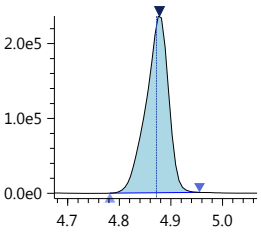
Q 513.00>468.80 (-) 2.37e5



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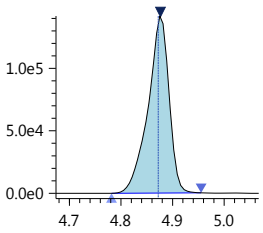
RT 4.876 Area 398468
ISTD 528.80>509.00 (-) 1.42e5



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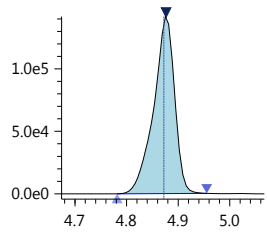
RT 4.876 Area 398468
Q 528.80>509.00 (-) 1.42e5



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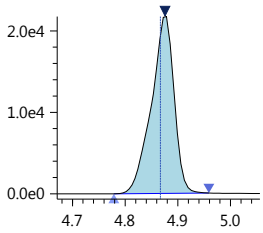

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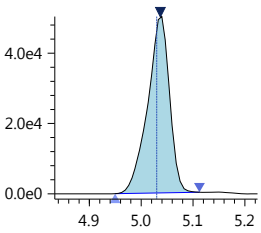

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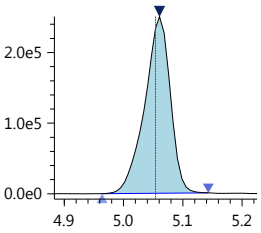

PFUnA-13C_IS
Conc 5.0000
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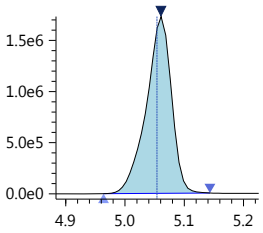
ISTD 564.80>519.95 (-) 1.73e6



Insight Report

Printed at 1/14/2019 12:39:49 PM

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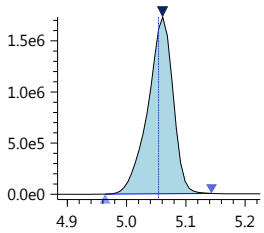
Q 564.80>519.95 (-) 1.73e6



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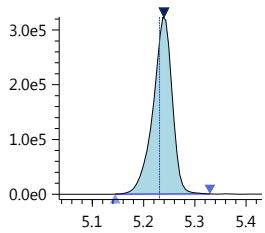

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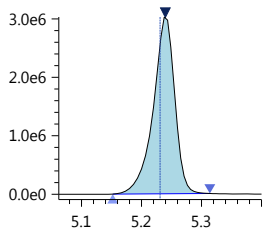

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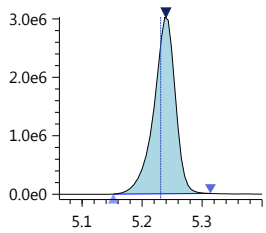

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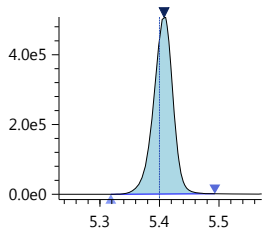

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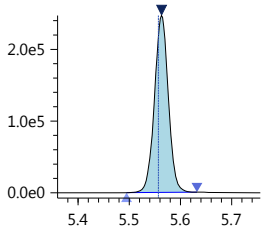

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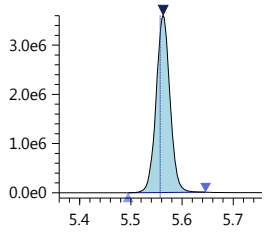

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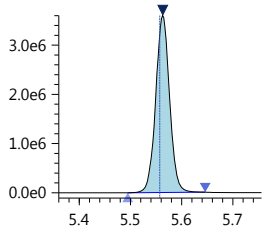

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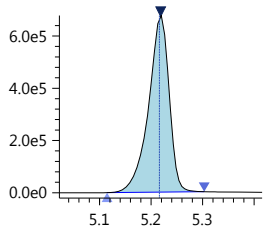

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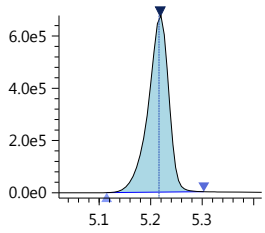

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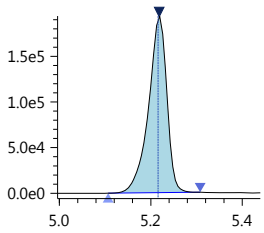

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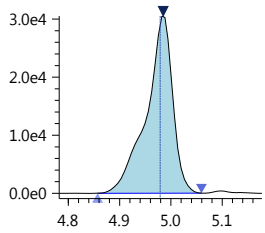

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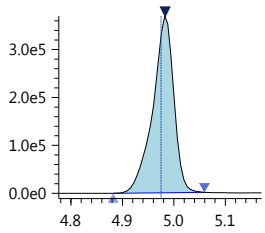
Q 572.80>419.05 (-) 3.70e5



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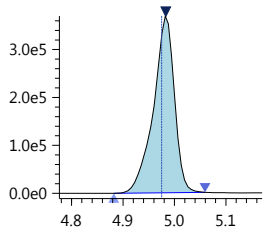

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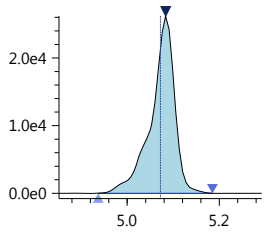

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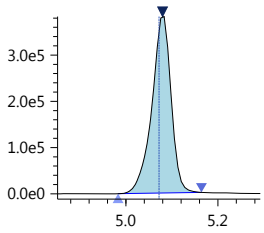

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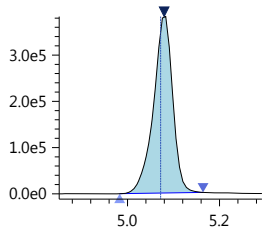

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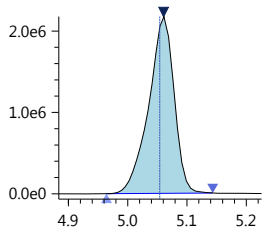

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Printed at 1/14/2019 11:23:27 AM

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Acquired by: System Administrator
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PFBA-13C_IS
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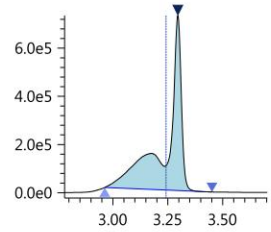

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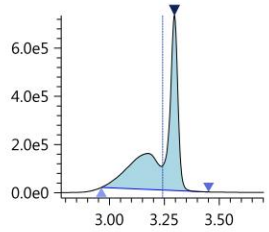

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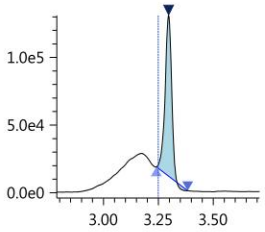

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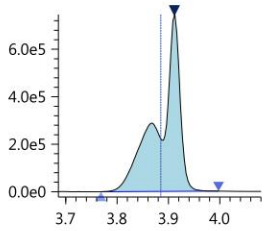

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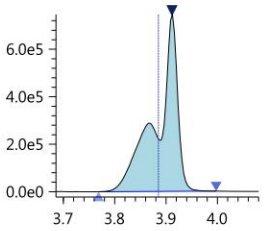

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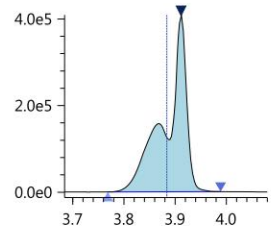

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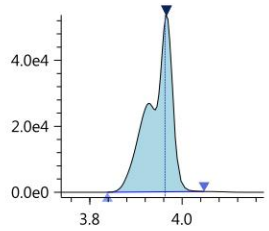

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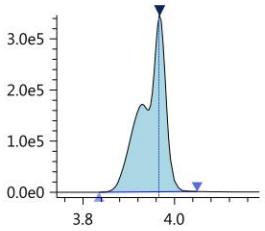
Q 301.80>80.00 (-) 3.47e5



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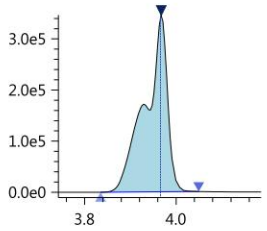

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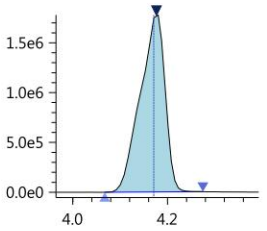

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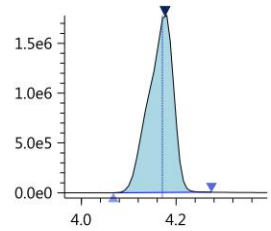

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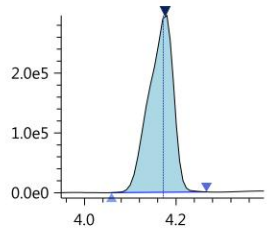

PFHpA
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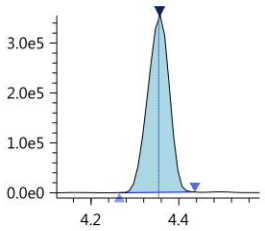
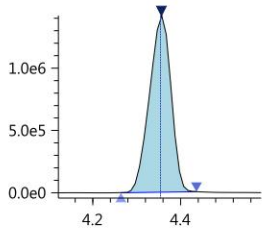
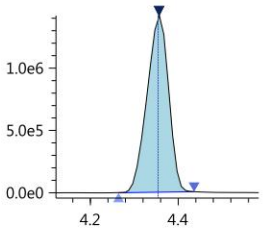
RT 4.356 Area 1226876
Q 362.90>319.00 (-) 3.55e5



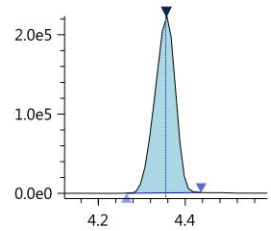
PFHpA-13C_IS
Conc 5.0000
RT 4.356 Area 4853521
ISTD 366.90>322.10 (-) 1.42e6



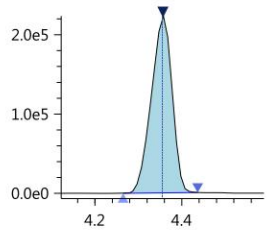
PFHpA-13C
Conc 4.7010
RT 4.356 Area 4853521
Q 366.90>322.10 (-) 1.42e6



PFHxS-18O_IS
Conc 5.0000
RT 4.357 Area 742654
ISTD 402.70>84.05 (-) 2.24e5



PFHxS-18O
Conc 4.5513
RT 4.357 Area 742654
Q 402.70>84.05 (-) 2.24e5



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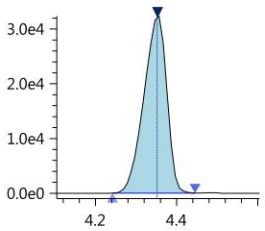
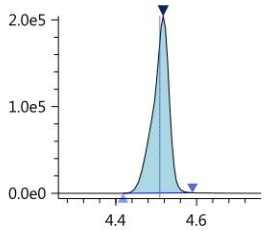
Conc 0.8290
RT 4.353 Area 127859
Q 399.00>80.00 (-) 3.24e4



6_2-FTS-13C
Conc 2.6690
RT 4.517 Area 556197
Q 428.90>409.00 (-) 2.05e5



6_2-FTS-13C_IS
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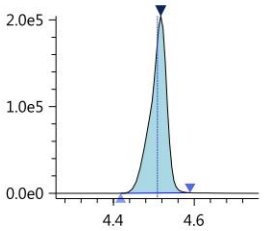
RT 4.517 Area 556197
ISTD 428.90>409.00 (-) 2.05e5



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6_2-FTS_1
Conc 0.9438
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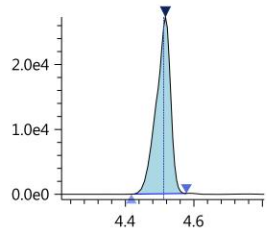
Q 427.00>407.00 (-) 2.73e4



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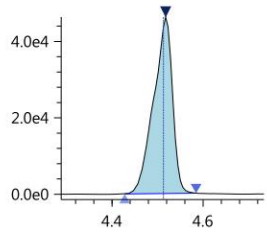
Conc 0.9041
RT 4.518 Area 133245
Q 449.00>80.15 (-) 4.64e4



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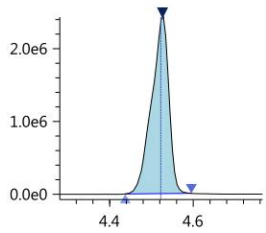
RT 4.526 Area 6976272
ISTD 416.80>372.05 (-) 2.44e6



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Conc 4.2499
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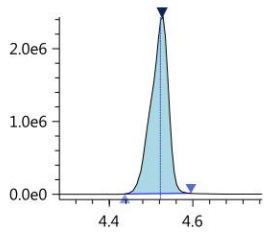
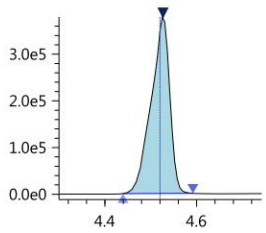
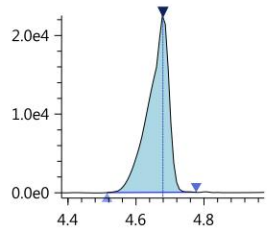
Q 416.80>372.05 (-) 2.44e6



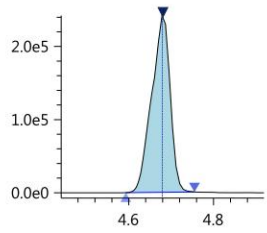
PFOA
Conc 1.0040
RT 4.526 Area 1066301
Q 413.00>369.00 (-) 3.80e5



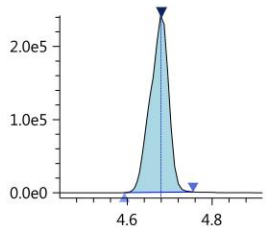
PFOS_1
Conc 0.9032
RT 4.680 Area 93453
Q 499.00>80.00 (-) 2.25e4



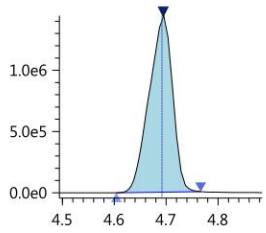
PFOS-13C_IS
Conc 5.0000
RT 4.680 Area 735250
ISTD 502.80>80.05 (-) 2.42e5



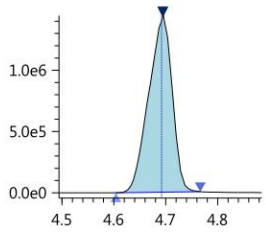
PFOS-13C
Conc 4.4268
RT 4.680 Area 735250
Q 502.80>80.05 (-) 2.42e5



PFNA-13C_IS
Conc 5.0000
RT 4.694 Area 4537128
ISTD 467.80>423.00 (-) 1.45e6



PFNA-13C
Conc 4.2384
RT 4.694 Area 4537128
Q 467.80>423.00 (-) 1.45e6



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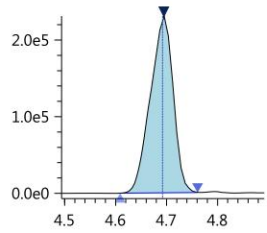
Conc 0.9558
RT 4.695 Area 717927
Q 463.00>418.90 (-) 2.31e5



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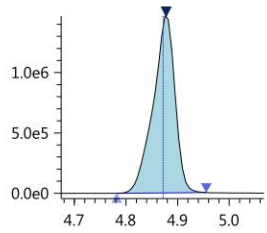
ISTD 514.80>469.95 (-) 1.47e6



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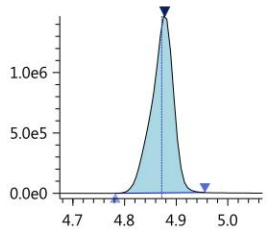
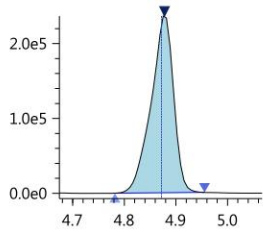
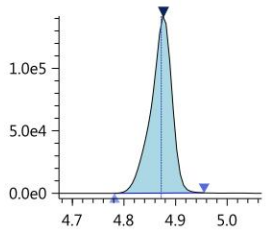
Q 514.80>469.95 (-) 1.47e6



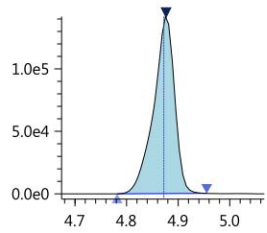
PFDA
Conc 0.9897
RT 4.878 Area 717234
Q 513.00>468.80 (-) 2.37e5



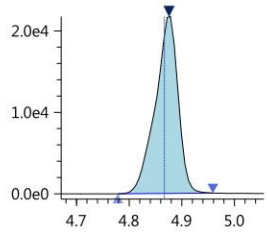
8_2-FTS-13C_IS
Conc 5.0000
RT 4.876 Area 398468
ISTD 528.80>509.00 (-) 1.42e5



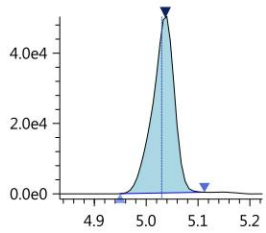
8_2-FTS-13C
Conc 2.8352
RT 4.876 Area 398468
Q 528.80>509.00 (-) 1.42e5



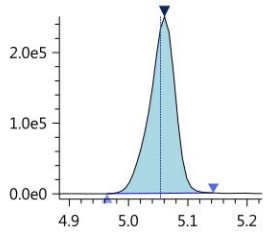
8_2-FTS_1
Conc 0.9102
RT 4.876 Area 65188
Q 527.10>506.90 (-) 2.18e4



PFDS_1
Conc 0.9773
RT 5.037 Area 146857
Q 599.00>79.90 (-) 5.04e4



PFUnA
Conc 0.9543
RT 5.061 Area 749527
Q 563.00>518.90 (-) 2.51e5



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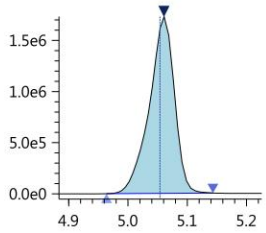
Conc 5.0000
RT 5.061 Area 5074272
ISTD 564.80>519.95 (-) 1.73e6



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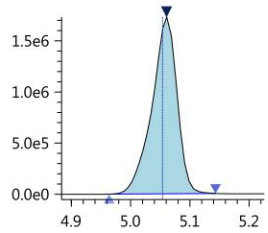
PFUnA-13C
Conc 4.5159
RT 5.061 Area 5074272
Q 564.80>519.95 (-) 1.73e6



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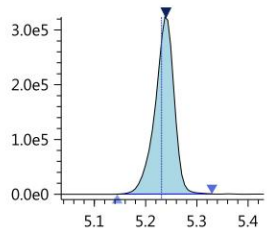
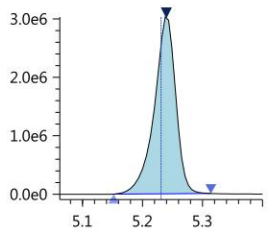
Conc 1.0239
RT 5.240 Area 841279
Q 613.05>569.00 (-) 3.24e5



PFDoA-13C
Conc 4.6477
RT 5.240 Area 7514941
Q 614.80>569.95 (-) 3.03e6



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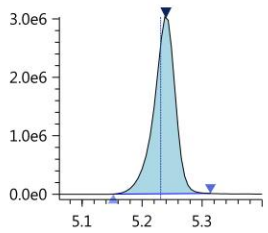
Conc 5.0000
RT 5.240 Area 7514941
ISTD 614.80>569.95 (-) 3.03e6



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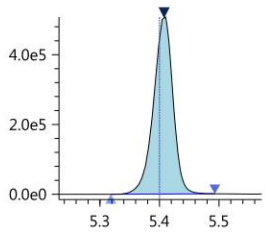
Conc 0.8329
RT 5.408 Area 1156100
Q 663.00>618.90 (-) 5.08e5



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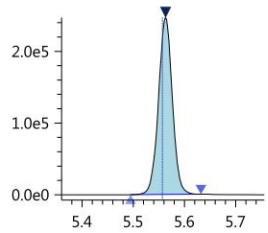
Conc 0.9407
RT 5.563 Area 464641
Q 713.40>669.00 (-) 2.47e5



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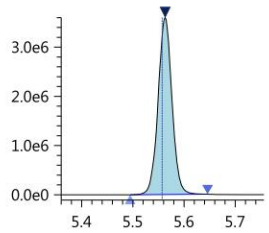
Conc 5.6895
RT 5.563 Area 6781186
Q 714.70>669.90 (-) 3.60e6



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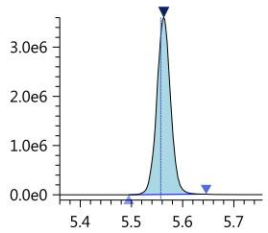
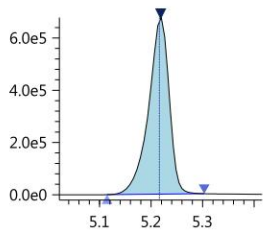
Conc 5.0000
RT 5.563 Area 6781186
ISTD 714.70>669.90 (-) 3.60e6



FOSA-13C_IS
Conc 5.0000
RT 5.218 Area 1874243
ISTD 506.00>78.05 (-) 6.78e5



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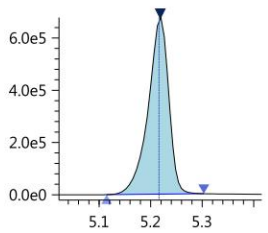
Q 506.00>78.05 (-) 6.78e5



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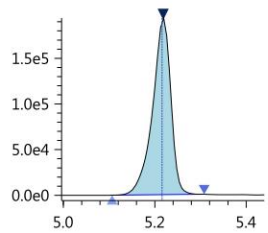
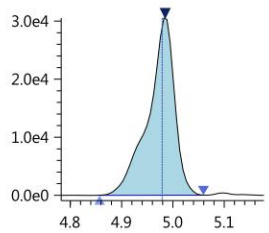
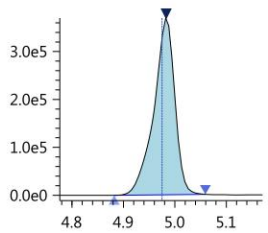
RT 5.218 Area 536281
Q 498.20>78.00 (-) 1.94e5



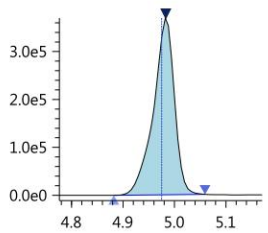
N-MeFOSAA
Conc 0.9800
RT 4.985 Area 108317
Q 570.20>419.00 (-) 3.05e4



N-MeFOSAA-d3
Conc 7.7589
RT 4.983 Area 1040925
Q 572.80>419.05 (-) 3.70e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.983 Area 1040925
ISTD 572.80>419.05 (-) 3.70e5



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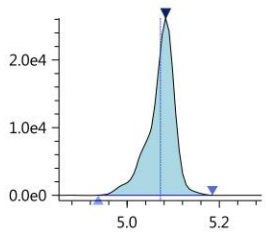
RT 5.084 Area 90569
Q 584.20>418.95 (-) 2.62e4



N-EtFOSAA-d5_IS
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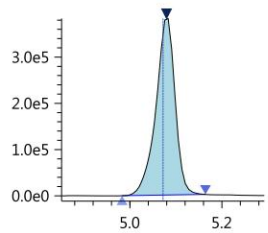
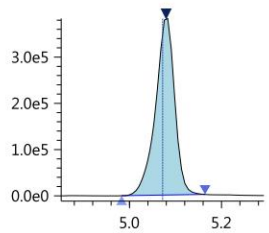
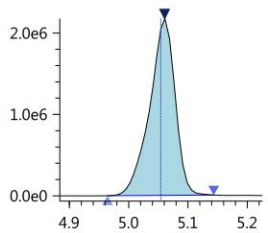
RT 5.080 Area 1109582
ISTD 588.80>419.00 (-) 3.83e5



N-EtFOSAA-d5
Conc 7.9634
RT 5.080 Area 1109582
Q 588.80>419.00 (-) 3.83e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.060 Area 6460521
ISTD 570.00>525.00 (-) 2.18e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_129
Lab ID: KQ1818747-01
RunType: MS
Matrix: Water

Date Acquired: 1/5/19 12:48
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_129	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 12:48	**Vial:**	11
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818747-01	**Raw Units:**	ng/mL

Bottle ID:	R1812115-005.02	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/13/18	**Receive Date:**	12/13/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	KQ1818747
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.076	+0.00	4243452	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.977	0.00	695443	4.0952	82	20 - 109	Y
18O2-PFHxS	4.370	+0.00	544749	4.6497	93	26 - 122	Y
13C4-PFOS	4.694	+0.00	463833	3.7933	76	25 - 121	Y
13C4-PFBA	3.315	-0.01	2424396	4.4525	89	27 - 124	Y
13C5-PFPeA	3.921	0.00	1522284	5.0169	100	27 - 138	Y
13C2-PFHxA	4.187	0.00	5037190	4.9714	99	28 - 132	Y
13C4-PFHpA	4.371	+0.00	3845733	5.0596	101	19 - 139	Y
13C4-PFOA	4.538	+0.00	4162126	4.1080	82	22 - 130	Y
13C5-PFNA	4.709	+0.00	3824381	4.5365	91	20 - 127	Y
13C2-PFDA	4.894	+0.00	3049113	4.1432	83	24 - 125	Y
13C2-PFUnDA	5.076	+0.00	2315920	3.3633	67	22 - 125	Y
13C2-PFDoDA	5.256	+0.00	3286227	3.2891	66	19 - 122	Y
13C2-PFTeDA	5.579	+0.00	2303539	3.2221	64	13 - 124	Y
13C8-FOSA	5.233	+0.01	1181967	3.6329	73	18 - 109	Y
D3-MeFOSAA	4.999	+0.00	419676	3.2592	65	9 - 123	Y
D5-EtFOSAA	5.096	+0.00	441782	3.5737	71	12 - 126	Y
13C2-6:2 FTS	4.527		453163	4.2992	86	10 - 226	Y
13C2-8:2 FTS	4.891	+0.00	287141	3.5029	70	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)	3.975	0.00	156926	1.1077	28.6		Y
Perfluorohexane sulfonic acid (PFHxS)	4.368		124181	1.1831	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

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1st CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_129	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 12:48	**Vial:**	11
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1818747-01	**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)	4.529		106438	0.9693	25.0		Y
Perfluorooctane sulfonic acid (PFOS)	4.695	+0.00	79048	1.1556	29.8		Y
Perfluorodecane sulfonic acid (PFDS)	5.053	+0.00	72240	0.8471	21.9		Y
Perfluorobutanoic acid (PFBA)	3.316	-0.01	952591	2.1681	56.0		Y
Perfluoropentanoic acid (PFPeA)	3.922		1117701	1.4213	36.7		Y
Perfluorohexanoic acid (PFHxA)	4.187		1663705	1.8715	48.3		Y
Perfluoroheptanoic acid (PFHpA)	4.371	+0.00	1033007	1.2572	32.4		Y
Perfluorooctanoic acid (PFOA)	4.538	+0.00	1255618	1.8395	47.5		Y
Perfluorononanoic acid (PFNA)	4.709	+0.00	607288	1.1950	30.8		Y
Perfluorodecanoic acid (PFDA)	4.894	+0.00	511040	1.0010	25.8		Y
Perfluoroundecanoic acid (PFUnDA)	5.077	+0.00	372650	0.9955	25.7		Y
Perfluorododecanoic acid (PFDoDA)	5.257	+0.01	384304	1.0775	27.8		Y
Perfluorotridecanoic acid (PFTrDA)	5.427	+0.00	443535	1.0720	27.7		Y
Perfluorotetradecanoic acid (PFTeDA)	5.578	+0.00	175685	1.1297	29.2		Y
Perfluorooctane sulfonamide (FOSA)	5.233	+0.01	303023	0.9596	24.8		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.001	+0.00	47308	1.0753	27.7		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.101	+0.00	40400	1.0202	26.3		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.527		98115	1.1717	30.2		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.890	+0.00	50680	1.0012	25.8		Y

Prep Amount:	310.0000 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 1/18/2019 10:42:01 AM

010419_129

Sample ID: KQ1818747-01
Date acquired: 1/5/2019 12:48:05 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_129.lcd
Vial: 31 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.315	2490928	2490928	2	5.0000	ng/mL	----
PFBA-13C	M	3.315	2424396	4243452	26	4.4525	ng/mL	----
PFBA	M	3.316	952591	2490928	2	2.1681	ng/mL	----
PFPeA-13C_IS	Auto	3.921	1522284	1522284	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.921	1522284	4243452	26	5.0169	ng/mL	----
PFPeA	Auto	3.922	1117701	1522284	4	1.4213	ng/mL	----
PFBS_1	Auto	3.975	156926	695443	16	1.1077	ng/mL	----
PFBS-13C	Auto	3.977	695443	4243452	26	4.0952	ng/mL	----
PFBS-13C_IS	Auto	3.977	695443	695443	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.187	5037190	5037190	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.187	5037190	4243452	26	4.9714	ng/mL	----
PFHxA	Auto	4.187	1663705	5037190	6	1.8715	ng/mL	----
PFHpA	Auto	4.371	1033007	3845733	8	1.2572	ng/mL	----
PFHpA-13C_IS	Auto	4.371	3845733	3845733	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.371	3845733	4243452	26	5.0596	ng/mL	----
PFHxS-18O_IS	Auto	4.370	544749	544749	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.370	544749	4243452	26	4.6497	ng/mL	----
PFHxS_1	Auto	4.368	124181	544749	7	1.1831	ng/mL	----
6_2-FTS-13C	Auto	4.527	453163	4243452	26	4.2992	ng/mL	----
6_2-FTS-13C_IS	Auto	4.527	453163	453163	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.527	98115	453163	10	1.1717	ng/mL	----
PFHpS_1	Auto	4.529	106438	544749	7	0.9693	ng/mL	----
PFOA-13C_IS	Auto	4.538	4162126	4162126	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.538	4162126	4243452	26	4.1080	ng/mL	----
PFOA	Auto	4.538	1255618	4162126	9	1.8395	ng/mL	----
PFOS_1	Auto	4.695	79048	463833	13	1.1556	ng/mL	----
PFOS-13C_IS	Auto	4.694	463833	463833	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.694	463833	4243452	26	3.7933	ng/mL	----
PFNA-13C_IS	Auto	4.709	3824381	3824381	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.709	3824381	4243452	26	4.5365	ng/mL	----
PFNA	Auto	4.709	607288	3824381	11	1.1950	ng/mL	----
PFDA-13C_IS	Auto	4.894	3049113	3049113	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.894	3049113	4243452	26	4.1432	ng/mL	----
PFDA	Auto	4.894	511040	3049113	12	1.0010	ng/mL	----
8_2-FTS-13C_IS	Auto	4.891	287141	287141	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.891	287141	4243452	26	3.5029	ng/mL	----
8_2-FTS_1	Auto	4.890	50680	287141	15	1.0012	ng/mL	----
PFDS_1	Auto	5.053	72240	463833	13	0.8471	ng/mL	----
PFUnA	Auto	5.077	372650	2315920	14	0.9955	ng/mL	----
PFUnA-13C_IS	Auto	5.076	2315920	2315920	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.076	2315920	4243452	26	3.3633	ng/mL	----
PFDoA	Auto	5.257	384304	3286227	17	1.0775	ng/mL	----
PFDoA-13C	Auto	5.256	3286227	4243452	26	3.2891	ng/mL	----
PFDoA-13C_IS	Auto	5.256	3286227	3286227	17	5.0000	ng/mL	----
PFTrDA	Auto	5.427	443535	2303539	22	1.0720	ng/mL	----
PFTeDA	Auto	5.578	175685	2303539	22	1.1297	ng/mL	----
PFTeDA-13C	Auto	5.579	2303539	4243452	26	3.2221	ng/mL	----
PFTeDA-13C_IS	Auto	5.579	2303539	2303539	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.233	1181967	1181967	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.233	1181967	4243452	26	3.6329	ng/mL	----
FOSA	Auto	5.233	303023	1181967	18	0.9596	ng/mL	----
N-MeFOSAA	M	5.001	47308	419676	19	1.0753	ng/mL	----
N-MeFOSAA-d3	Auto	4.999	419676	4243452	26	3.2592	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.999	419676	419676	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.624	327323	327323	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.624	327323	4243452	26	3.5355	ng/mL	----
N-MeFOSA	Auto	5.627	96428	327323	1	1.1156	ng/mL	----
N-MeFOSE-d7	Auto	5.595	504876	4243452	26	3.7540	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.595	504876	504876	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.603	146940	504876	20	1.0017	ng/mL	----
N-EtFOSAA	M	5.101	40400	441782	21	1.0202	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.096	441782	441782	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.096	441782	4243452	26	3.5737	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.762	505581	505581	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.762	505581	4243452	26	3.2568	ng/mL	----
N-EtFOSA	Auto	5.768	17784	505581	23	0.9924	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.727	518164	518164	24	5.0000	ng/mL	----

Insight Report

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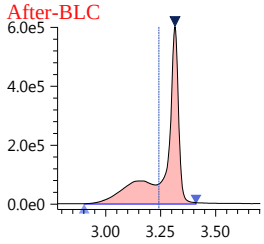
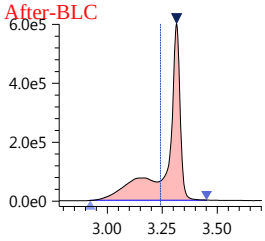
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.727	518164	4243452	26	3.5699	ng/mL	----
N-EtFOSE	Auto	5.738	116632	518164	24	0.9254	ng/mL	----
13C7-PFUnDA_IS	Auto	5.076	4243452	4243452	26	5.0000	ng/mL	----

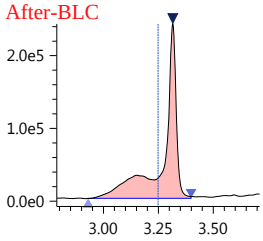
PFBA-13C_IS
Conc 5.0000
RT 3.315 Area 2490928
ISTD 216.90>172.15 (-) 6.02e5
After-BLC



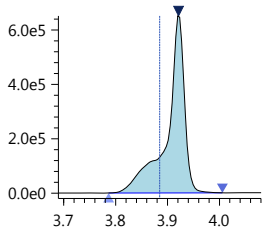
PFBA-13C
Conc 4.4525
RT 3.315 Area 2424396
Q 216.90>172.15 (-) 6.02e5
After-BLC



PFBA
Conc 2.1681
RT 3.316 Area 952591
Q 213.00>169.10 (-) 2.44e5
After-BLC



PFPeA-13C_IS
Conc 5.0000
RT 3.921 Area 1522284
ISTD 267.90>223.00 (-) 6.52e5



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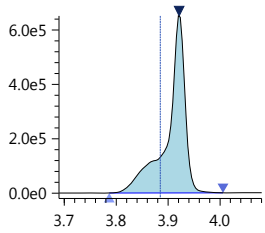
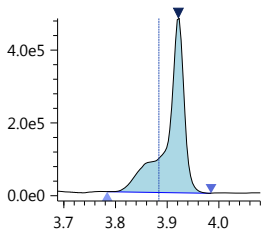
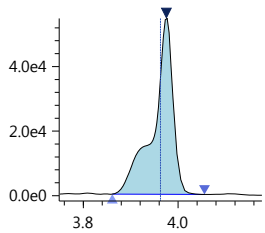


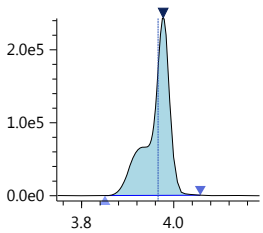
PFPeA
Conc 1.4213
RT 3.922 Area 1117701
Q 263.05>219.10 (-) 4.87e5



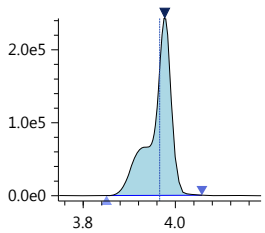
PFBS_1
Conc 1.1077
RT 3.975 Area 156926
Q 299.00>80.00 (-) 5.49e4



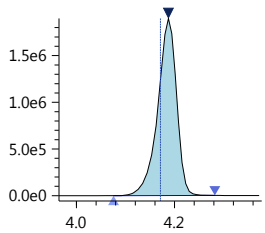
PFBS-13C
Conc 4.0952
RT 3.977 Area 695443
Q 301.80>80.00 (-) 2.43e5



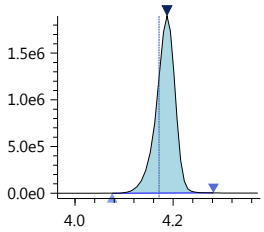
PFBS-13C_IS
Conc 5.0000
RT 3.977 Area 695443
ISTD 301.80>80.00 (-) 2.43e5



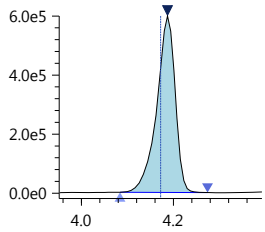
PFHxA-13C_IS
Conc 5.0000
RT 4.187 Area 5037190
ISTD 314.90>270.10 (-) 1.90e6



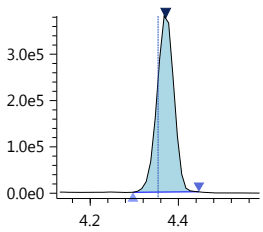
PFHxA-13C
Conc 4.9714
RT 4.187 Area 5037190
Q 314.90>270.10 (-) 1.90e6



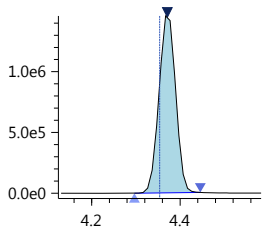
PFHxA
Conc 1.8715
RT 4.187 Area 1663705
Q 313.00>269.00 (-) 6.00e5



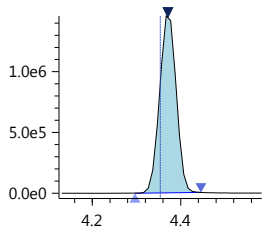
PFHpA
Conc 1.2572
RT 4.371 Area 1033007
Q 362.90>319.00 (-) 3.83e5



PFHpA-13C_IS
Conc 5.0000
RT 4.371 Area 3845733
ISTD 366.90>322.10 (-) 1.46e6



PFHpA-13C
Conc 5.0596
RT 4.371 Area 3845733
Q 366.90>322.10 (-) 1.46e6



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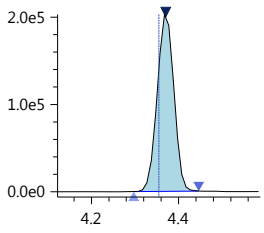
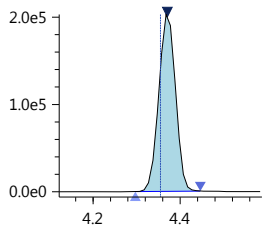
Conc 5.0000
RT 4.370 Area 544749
ISTD 402.70>84.05 (-) 2.03e5



PFHxS-18O
Conc 4.6497
RT 4.370 Area 544749
Q 402.70>84.05 (-) 2.03e5



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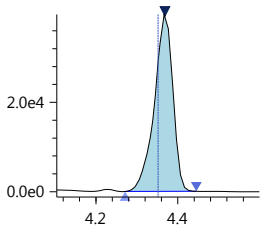
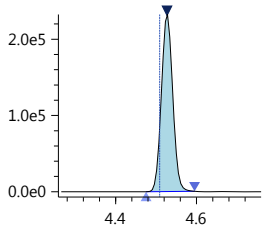
Conc 1.1831
RT 4.368 Area 124181
Q 399.00>80.00 (-) 3.97e4



6_2-FTS-13C
Conc 4.2992
RT 4.527 Area 453163
Q 428.90>409.00 (-) 2.32e5



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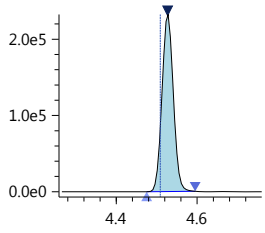
RT 4.527 Area 453163
ISTD 428.90>409.00 (-) 2.32e5



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6_2-FTS_1
Conc 1.1717
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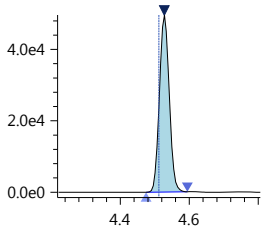
Q 427.00>407.00 (-) 4.96e4



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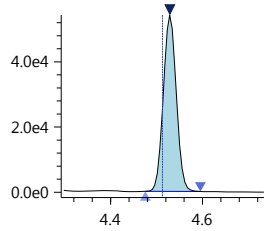
Conc 0.9693
RT 4.529 Area 106438
Q 449.00>80.15 (-) 5.44e4



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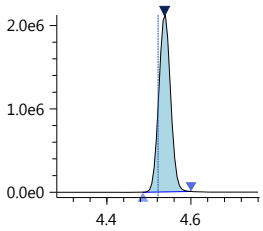
Conc 5.0000
RT 4.538 Area 4162126
ISTD 416.80>372.05 (-) 2.13e6



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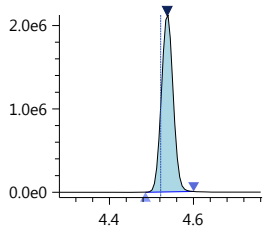
Conc 4.1080
RT 4.538 Area 4162126
Q 416.80>372.05 (-) 2.13e6



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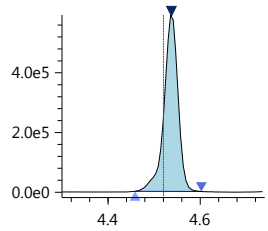
RT 4.538 Area 1255618
Q 413.00>369.00 (-) 5.94e5



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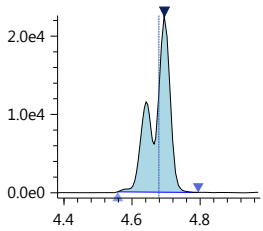
Conc 1.1556
RT 4.695 Area 79048
Q 499.00>80.00 (-) 2.26e4



PFOS-13C_IS
Conc 5.0000
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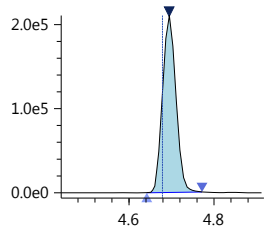
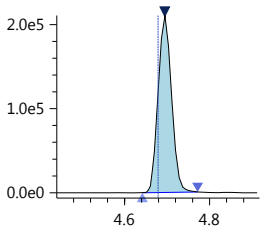
ISTD 502.80>80.05 (-) 2.11e5



PFOS-13C
Conc 3.7933
RT 4.694 Area 463833
Q 502.80>80.05 (-) 2.11e5



PFNA-13C_IS
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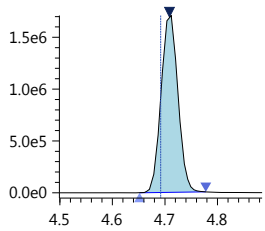
RT 4.709 Area 3824381
ISTD 467.80>423.00 (-) 1.71e6



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RT 4.709 Area 3824381
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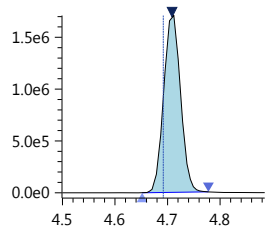

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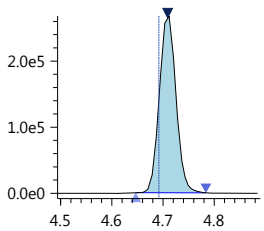
Conc 1.1950
RT 4.709 Area 607288
Q 463.00>418.90 (-) 2.68e5



PFDA-13C_IS
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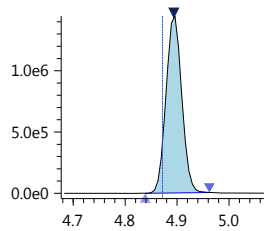
RT 4.894 Area 3049113
ISTD 514.80>469.95 (-) 1.45e6



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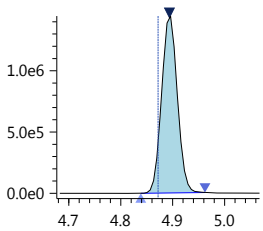
Q 514.80>469.95 (-) 1.45e6



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Conc 1.0010
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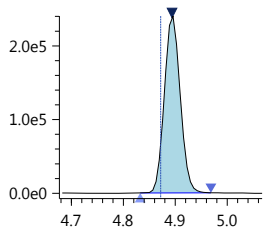
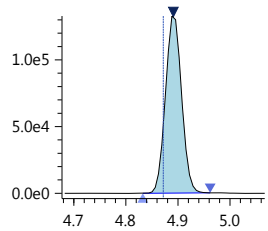
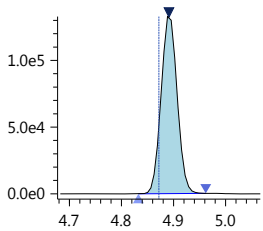


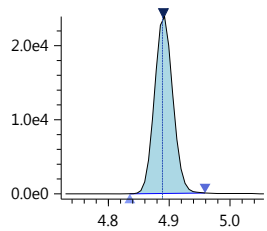
8_2-FTS-13C_IS
Conc 5.0000
RT 4.891 Area 287141
ISTD 528.80>509.00 (-) 1.33e5



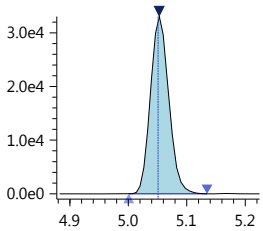
8_2-FTS-13C
Conc 3.5029
RT 4.891 Area 287141
Q 528.80>509.00 (-) 1.33e5



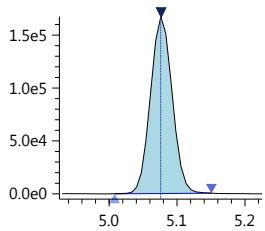
8_2-FTS_1
Conc 1.0012
RT 4.890 Area 50680
Q 527.10>506.90 (-) 2.39e4



PFDS_1
Conc 0.8471
RT 5.053 Area 72240
Q 599.00>79.90 (-) 3.30e4



PFUnA
Conc 0.9955
RT 5.077 Area 372650
Q 563.00>518.90 (-) 1.68e5



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Conc 5.0000
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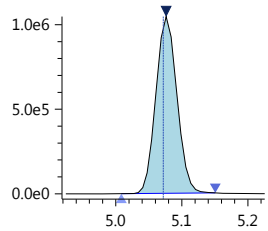
ISTD 564.80>519.95 (-) 1.05e6



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PFUnA-13C
Conc 3.3633
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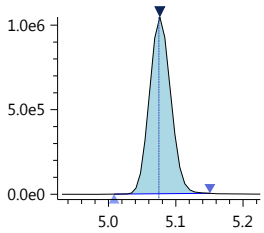
Q 564.80>519.95 (-) 1.05e6



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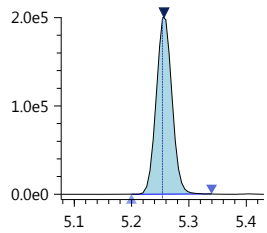
Conc 1.0775
RT 5.257 Area 384304
Q 613.05>569.00 (-) 2.01e5



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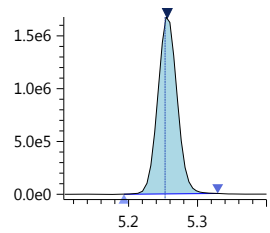
Conc 3.2891
RT 5.256 Area 3286227
Q 614.80>569.95 (-) 1.68e6



PFDoA-13C_IS
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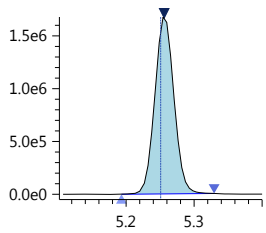
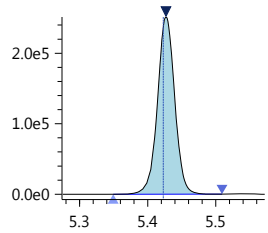
RT 5.256 Area 3286227
ISTD 614.80>569.95 (-) 1.68e6



PFTrDA
Conc 1.0720
RT 5.427 Area 443535
Q 663.00>618.90 (-) 2.51e5



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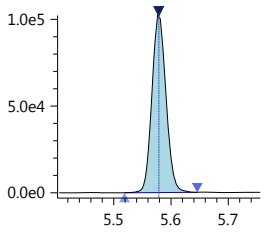
RT 5.578 Area 175685
Q 713.40>669.00 (-) 1.02e5



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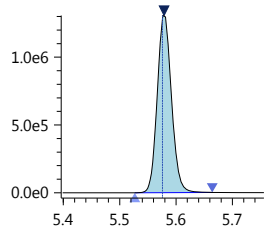
Conc 3.2221
RT 5.579 Area 2303539
Q 714.70>669.90 (-) 1.31e6



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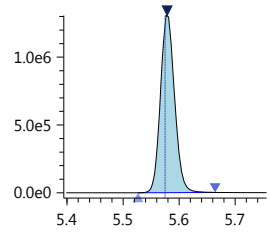

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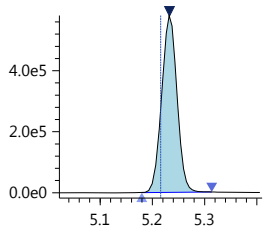
Conc 5.0000
RT 5.233 Area 1181967
ISTD 506.00>78.05 (-) 5.81e5



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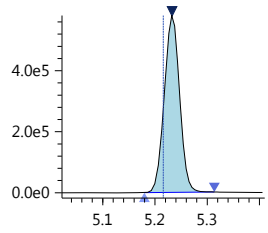
Q 506.00>78.05 (-) 5.81e5



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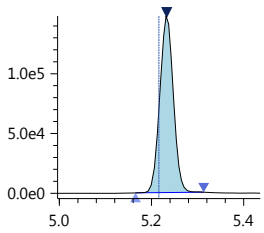
Q 498.20>78.00 (-) 1.48e5



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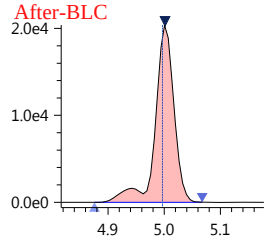
Conc 1.0753
RT 5.001 Area 47308
Q 570.20>419.00 (-) 2.04e4



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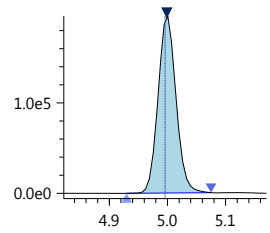
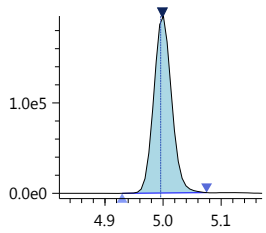
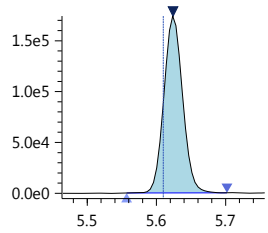
Conc 3.2592
RT 4.999 Area 419676
Q 572.80>419.05 (-) 1.96e5



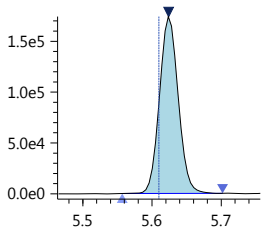
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.999 Area 419676
ISTD 572.80>419.05 (-) 1.96e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 327323
ISTD 514.90>168.90 (-) 1.74e5



N-MeFOSA-d3
Conc 3.5355
RT 5.624 Area 327323
Q 514.90>168.90 (-) 1.74e5



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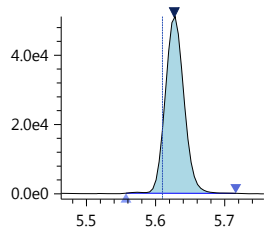
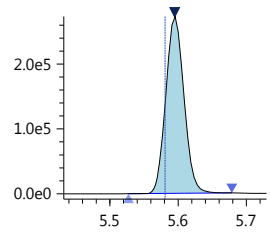
RT 5.627 Area 96428
Q 512.00>169.10 (-) 5.12e4



N-MeFOSE-d7
Conc 3.7540
RT 5.595 Area 504876
Q 622.70>59.10 (-) 2.73e5



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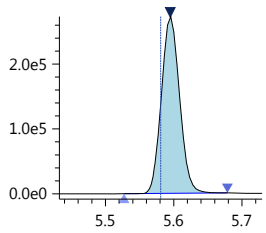
ISTD 622.70>59.10 (-) 2.73e5



N-MeFOSE
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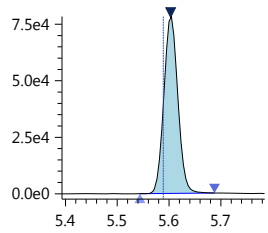

Insight Report

Printed at 1/18/2019 10:42:01 AM

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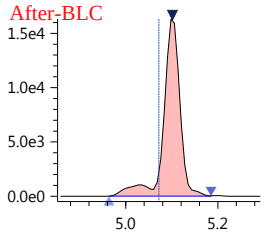

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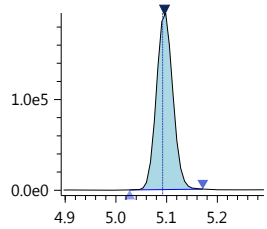
RT 5.096 Area 441782
ISTD 588.80>419.00 (-) 1.96e5



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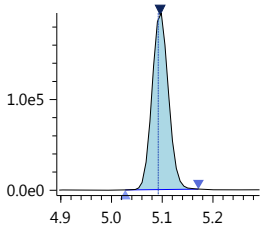
Q 588.80>419.00 (-) 1.96e5



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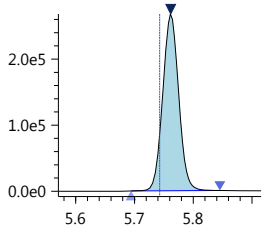
ISTD 530.90>169.15 (-) 2.68e5



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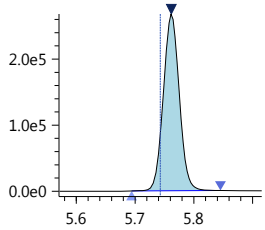
RT 5.762 Area 505581
Q 530.90>169.15 (-) 2.68e5



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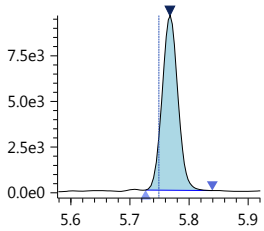
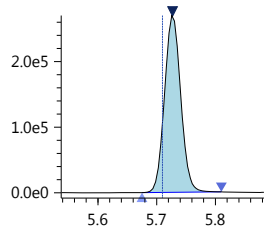
Q 526.90>169.10 (-) 9.70e3



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.727 Area 518164
ISTD 638.70>59.10 (-) 2.70e5



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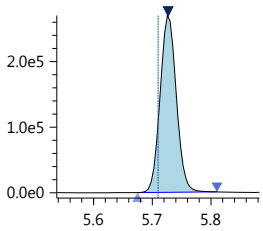

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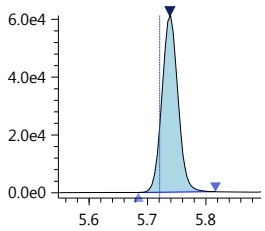

13C7-PFUnDA_IS
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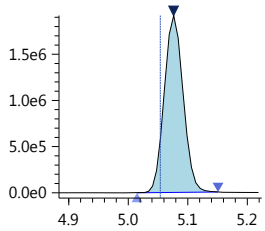

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Printed at 1/18/2019 8:51:07 AM

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Date acquired: 1/5/2019 12:48:05 PM
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PFBA-13C_IS
Conc 5.0000
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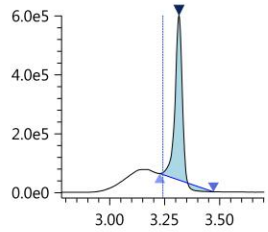

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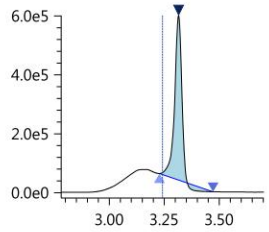

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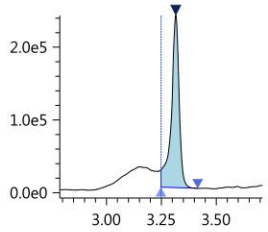

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Conc 5.0000
RT 3.921 Area 1522284
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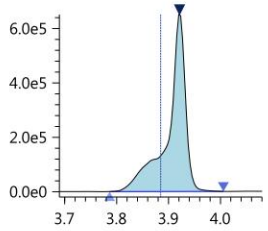

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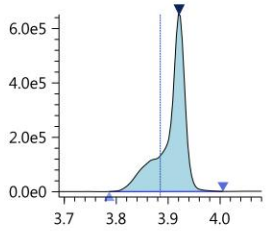

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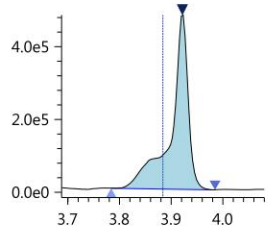

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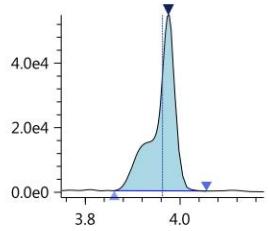

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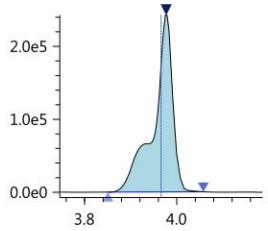

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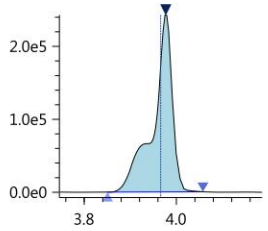

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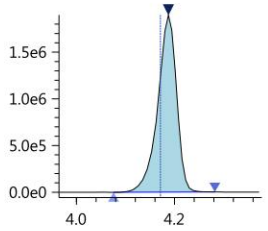

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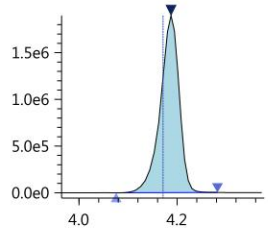

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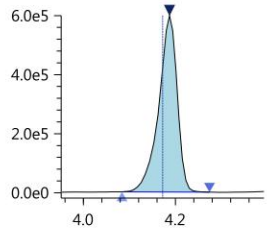

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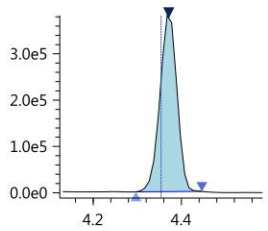

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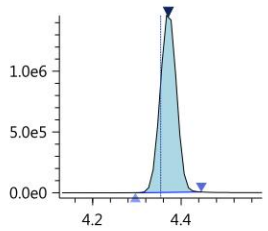

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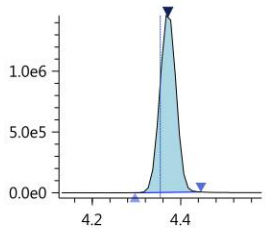

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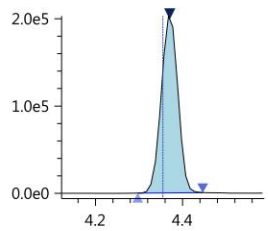

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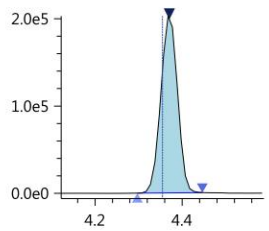

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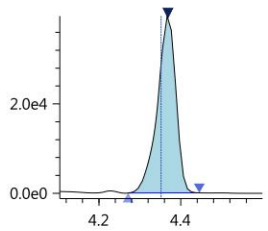

6_2-FTS-13C
Conc 4.2992
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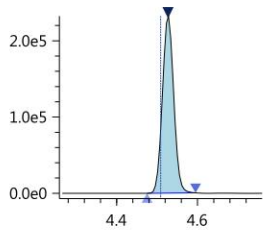
Q 428.90>409.00 (-) 2.32e5



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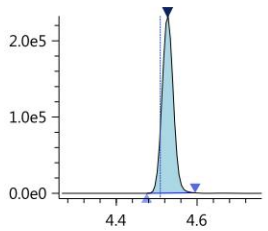

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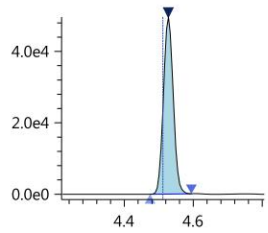

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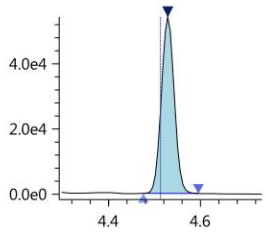

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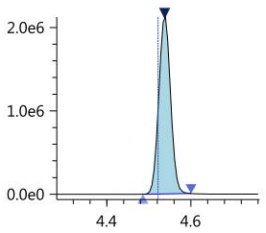

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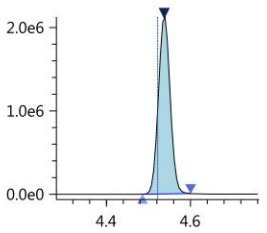

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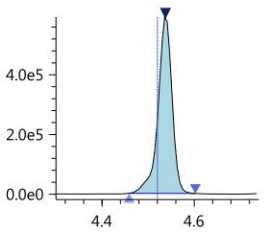

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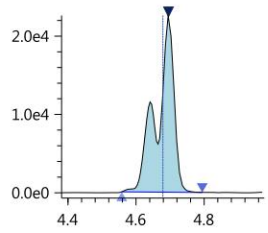

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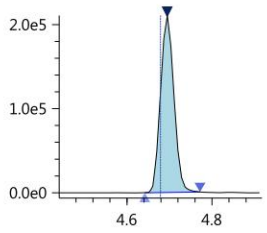

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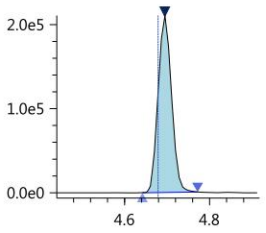

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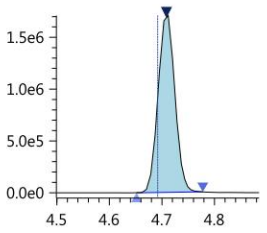

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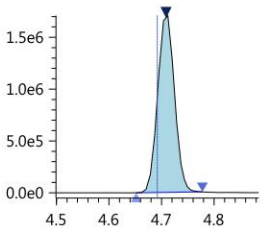

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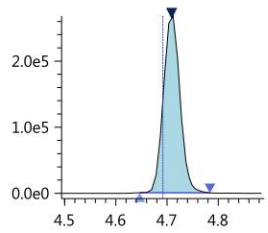

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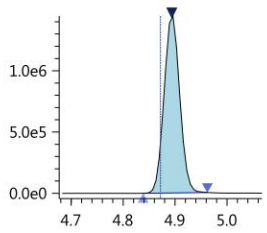

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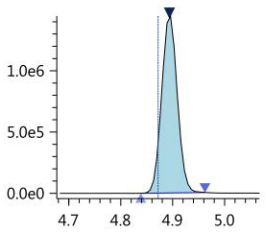
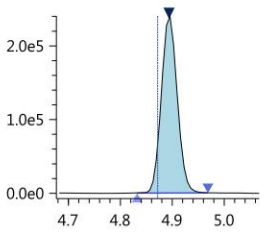
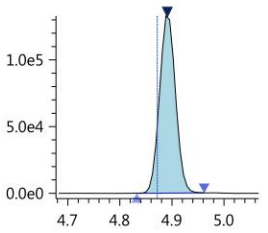
RT 4.894 Area 3049113
Q 514.80>469.95 (-) 1.45e6



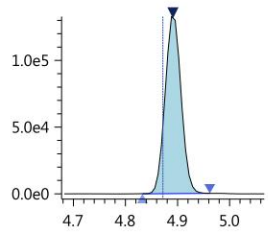
PFDA
Conc 1.0010
RT 4.894 Area 511040
Q 513.00>468.80 (-) 2.41e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.891 Area 287141
ISTD 528.80>509.00 (-) 1.33e5



8_2-FTS-13C
Conc 3.5029
RT 4.891 Area 287141
Q 528.80>509.00 (-) 1.33e5



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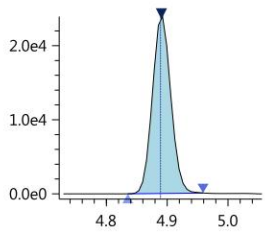
Conc 1.0012
RT 4.890 Area 50680
Q 527.10>506.90 (-) 2.39e4



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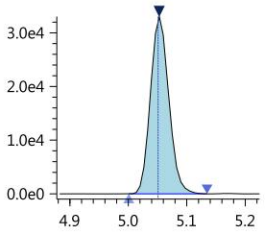
Conc 0.8471
RT 5.053 Area 72240
Q 599.00>79.90 (-) 3.30e4



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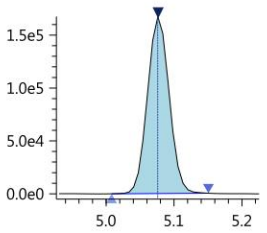
Conc 0.9955
RT 5.077 Area 372650
Q 563.00>518.90 (-) 1.68e5



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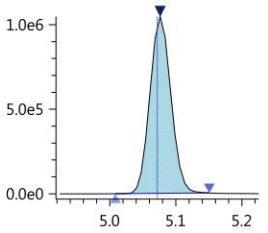
Conc 5.0000
RT 5.076 Area 2315920
ISTD 564.80>519.95 (-) 1.05e6



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PFUnA-13C
Conc 3.3633
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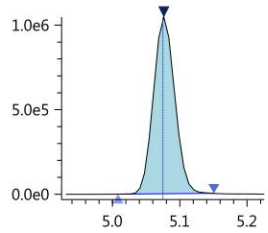
Q 564.80>519.95 (-) 1.05e6



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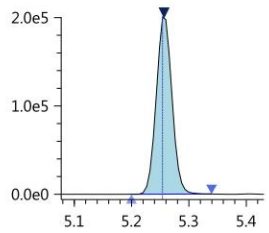
RT 5.257 Area 384304
Q 613.05>569.00 (-) 2.01e5



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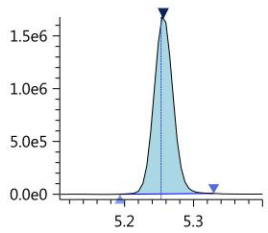
Conc 3.2891
RT 5.256 Area 3286227
Q 614.80>569.95 (-) 1.68e6



PFDoA-13C_IS
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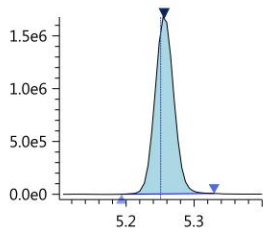
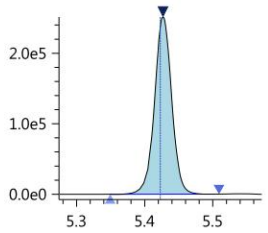
ISTD 614.80>569.95 (-) 1.68e6



PFTrDA
Conc 1.0720
RT 5.427 Area 443535
Q 663.00>618.90 (-) 2.51e5



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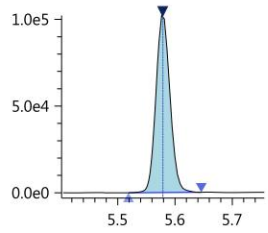
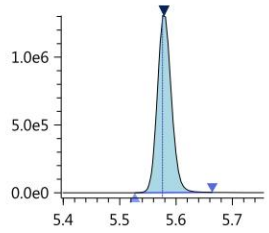
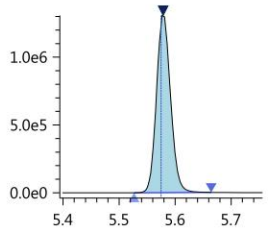
Conc 1.1297
RT 5.578 Area 175685
Q 713.40>669.00 (-) 1.02e5



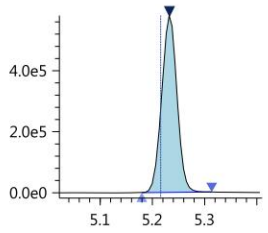
PFTeDA-13C
Conc 3.2221
RT 5.579 Area 2303539
Q 714.70>669.90 (-) 1.31e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.579 Area 2303539
ISTD 714.70>669.90 (-) 1.31e6



FOSA-13C_IS
Conc 5.0000
RT 5.233 Area 1181967
ISTD 506.00>78.05 (-) 5.81e5



FOSA-13C
Conc 3.6329
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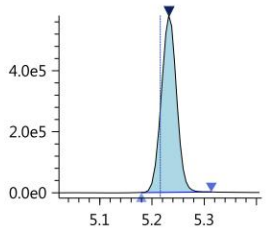

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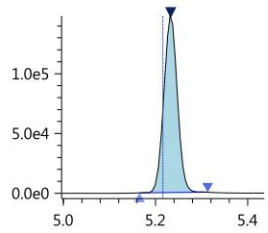
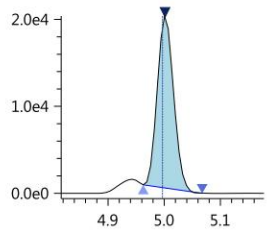
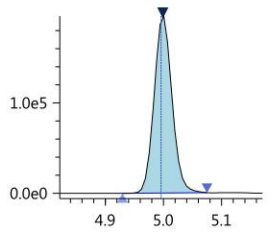
Q 498.20>78.00 (-) 1.48e5



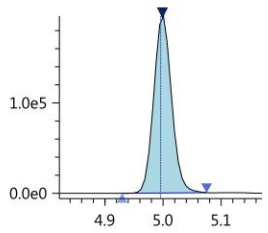
N-MeFOSAA
Conc 0.9111
RT 5.001 Area 40082
Q 570.20>419.00 (-) 2.04e4



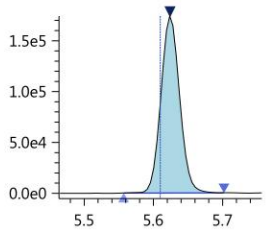
N-MeFOSAA-d3
Conc 3.2592
RT 4.999 Area 419676
Q 572.80>419.05 (-) 1.96e5



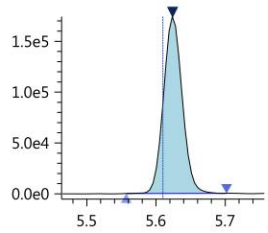
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.999 Area 419676
ISTD 572.80>419.05 (-) 1.96e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 327323
ISTD 514.90>168.90 (-) 1.74e5



N-MeFOSA-d3
Conc 3.5355
RT 5.624 Area 327323
Q 514.90>168.90 (-) 1.74e5



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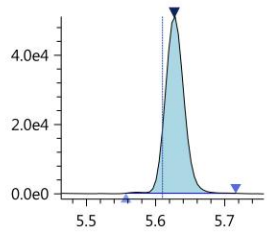
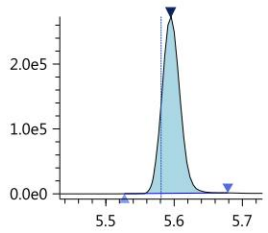
Conc 1.1156
RT 5.627 Area 96428
Q 512.00>169.10 (-) 5.12e4



N-MeFOSE-d7
Conc 3.7540
RT 5.595 Area 504876
Q 622.70>59.10 (-) 2.73e5



N-MeFOSE-d7_IS
Conc 5.0000
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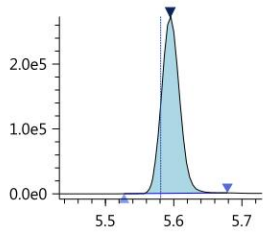
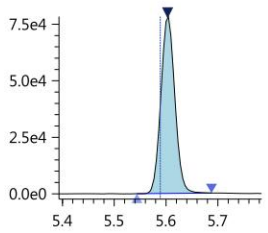
ISTD 622.70>59.10 (-) 2.73e5



N-MeFOSE
Conc 1.0017
RT 5.603 Area 146940
Q 616.00>59.00 (-) 7.84e4



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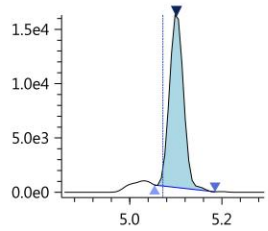
N-EtFOSAA
Conc 0.8707
RT 5.101 Area 34307
Q 584.20>418.95 (-) 1.63e4



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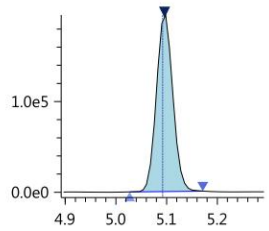
Conc 5.0000
RT 5.096 Area 441782
ISTD 588.80>419.00 (-) 1.96e5



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Conc 3.5737
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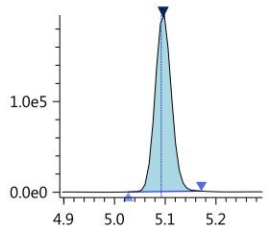
Q 588.80>419.00 (-) 1.96e5



N-EtFOSA-d9_IS
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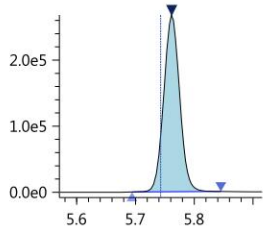
ISTD 530.90>169.15 (-) 2.68e5



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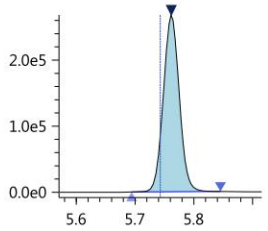
Q 530.90>169.15 (-) 2.68e5



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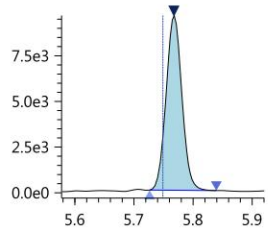
Q 526.90>169.10 (-) 9.70e3



N-EtFOSE-d9_IS
Conc 5.0000
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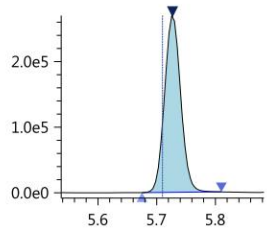
ISTD 638.70>59.10 (-) 2.70e5



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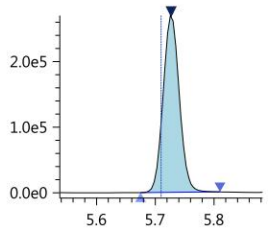
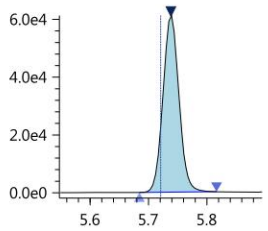
Q 638.70>59.10 (-) 2.70e5



N-EtFOSE
Conc 0.9254
RT 5.738 Area 116632
Q 630.00>58.90 (-) 6.13e4



13C7-PFUnDA_IS
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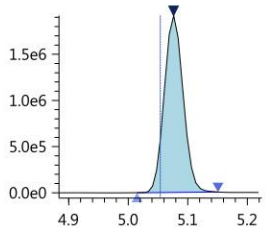
RT 5.076 Area 4243452
ISTD 570.00>525.00 (-) 1.92e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_053
Lab ID: KQ1818316-02
RunType: DMS
Matrix: Soil

Date Acquired: 12/21/18 04:11
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	13C2-6:2 FTS	58	70	130	Native ok
	D5-EtFOSAA	184	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D3-MeFOSAA	174	70	130	Native ok
Surrogates	D3-MeFOSAA	157	20	154	Native ok
	D5-EtFOSAA	164	29	153	Native ok

Primary Review: _____

Printed: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_053	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 04:11	**Vial:**	8
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818316-02	**Raw Units:**	ng/mL

Bottle ID:	K1812302-002.01	**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**	328407	**Report Group:**	KQ1818316
Analysis	PFC/537M	**Prep Method:**	EPA 3550B		
		Prep Date:	12/17/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.059	0.00	6581521	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.968	0.00	1221924	4.4018	88		33 - 109	Y
18O2-PFHxS	4.357	0.00	761932	4.5836	92		36 - 120	Y
13C4-PFOS	4.680	0.00	735117	4.3447	87		32 - 130	Y
13C4-PFBA	3.294	-0.02	3760046	4.5908	92		34 - 116	Y
13C5-PFPeA	3.912	0.00	2164970	5.2752	106		39 - 133	Y
13C2-PFHxA	4.175	0.00	6637909	4.6014	92		32 - 136	Y
13C4-PFHpA	4.357	0.00	5162846	4.9087	98		36 - 133	Y
13C4-PFOA	4.526	0.00	7173484	4.2897	86		31 - 134	Y
13C5-PFNA	4.693	0.00	4396552	4.0315	81		27 - 133	Y
13C2-PFDA	4.877	0.00	4374924	4.3703	87		30 - 137	Y
13C2-PFUnDA	5.059	0.00	5055107	4.4161	88		32 - 146	Y
13C2-PFDoDA	5.239		7445321	4.5200	90		36 - 136	Y
13C2-PFTeDA	5.563		6936846	5.7131	114		39 - 138	Y
13C8-FOSA	5.217	+0.00	1937586	4.8569	97		40 - 132	Y
D3-MeFOSAA	4.982	0.00	1072174	7.8449	157	*	20 - 154	Y
D5-EtFOSAA	5.079		1162229	8.1879	164	*	29 - 153	Y
13C2-6:2 FTS	4.517	0.00	555344	2.6159	52		30 - 140	Y
13C2-8:2 FTS	4.875	0.00	392372	2.7405	55		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.966	0.00	184095	0.8500	6.66		Y
Perfluorohexane sulfonic acid (PFHxS)	4.351	-0.01	145766	0.9212	7.21		Y

1st CM 01/14/19

2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_053	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 04:11	**Vial:**	8
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818316-02	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.518	0.00	140621	0.9300	7.28		Y
Perfluorooctane sulfonic acid (PFOS)	4.679	0.00	96870	0.9364	7.33		Y
Perfluorodecane sulfonic acid (PFDS)	5.037	0.00	153360	1.0208	7.99		Y
Perfluorobutanoic acid (PFBA)	3.295	-0.02	646404	1.0100	7.91		Y
Perfluoropentanoic acid (PFPeA)	3.912	0.00	1187861	0.9050	7.09		Y
Perfluorohexanoic acid (PFHxA)	4.176	0.00	1156553	0.9653	7.56		Y
Perfluoroheptanoic acid (PFHpA)	4.357	0.00	1310384	0.9375	7.34		Y
Perfluorooctanoic acid (PFOA)	4.526	0.00	1096921	1.0045	7.87		Y
Perfluorononanoic acid (PFNA)	4.692	0.00	712406	0.9789	7.67		Y
Perfluorodecanoic acid (PFDA)	4.877	0.00	738001	1.0033	7.86		Y
Perfluoroundecanoic acid (PFUnDA)	5.059	0.00	739782	0.9455	7.40		Y
Perfluorododecanoic acid (PFDoDA)	5.239		806055	0.9904	7.76		Y
Perfluorotridecanoic acid (PFTrDA)	5.408		1158529	0.8159	6.39		Y
Perfluorotetradecanoic acid (PFTeDA)	5.563		485458	0.9630	7.54		Y
Perfluorooctane sulfonamide (FOSA)	5.217	+0.00	564619	0.9248	7.24		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.985	0.00	121145	1.0641	8.33		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.080	0.00	89375	0.9627	7.54		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.517		84249	1.0049	7.87		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.875	0.00	64156	0.9097	7.12		Y

Prep Amount:	1.073 g	**Dilution:**	1
Prep Final Amount:	8.00 mL	**Basis Factor:**	95.20

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 1/14/2019 12:39:49 PM

122018_053

Sample ID: KQ1818316-02
Date acquired: 12/21/2018 4:11:36 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_053.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.294	3753671	3753671	2	5.0000	ng/mL	----
PFBA-13C	M	3.294	3760046	6581521	26	4.5908	ng/mL	----
PFBA	M	3.295	646404	3753671	2	1.0100	ng/mL	----
PFPeA-13C_IS	Auto	3.912	2164970	2164970	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.912	2164970	6581521	26	5.2752	ng/mL	----
PFPeA	Auto	3.912	1187861	2164970	4	0.9050	ng/mL	----
PFBS_1	Auto	3.966	184095	1221924	16	0.8500	ng/mL	----
PFBS-13C	Auto	3.968	1221924	6581521	26	4.4018	ng/mL	----
PFBS-13C_IS	Auto	3.968	1221924	1221924	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.175	6637909	6637909	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.175	6637909	6581521	26	4.6014	ng/mL	----
PFHxA	Auto	4.176	1156553	6637909	6	0.9653	ng/mL	----
PFHpA	Auto	4.357	1310384	5162846	8	0.9375	ng/mL	----
PFHpA-13C_IS	Auto	4.357	5162846	5162846	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.357	5162846	6581521	26	4.9087	ng/mL	----
PFHxS-18O_IS	Auto	4.357	761932	761932	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.357	761932	6581521	26	4.5836	ng/mL	----
PFHxS_1	Auto	4.351	145766	761932	7	0.9212	ng/mL	----
6_2-FTS-13C	Auto	4.517	555344	6581521	26	2.6159	ng/mL	----
6_2-FTS-13C_IS	Auto	4.517	555344	555344	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.517	84249	555344	10	1.0049	ng/mL	----
PFHpS_1	Auto	4.518	140621	761932	7	0.9300	ng/mL	----
PFOA-13C_IS	Auto	4.526	7173484	7173484	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.526	7173484	6581521	26	4.2897	ng/mL	----
PFOA	Auto	4.526	1096921	7173484	9	1.0045	ng/mL	----
PFOS_1	Auto	4.679	96870	735117	13	0.9364	ng/mL	----
PFOS-13C_IS	Auto	4.680	735117	735117	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.680	735117	6581521	26	4.3447	ng/mL	----
PFNA-13C_IS	Auto	4.693	4396552	4396552	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.693	4396552	6581521	26	4.0315	ng/mL	----
PFNA	Auto	4.692	712406	4396552	11	0.9789	ng/mL	----
PFDA-13C_IS	Auto	4.877	4374924	4374924	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.877	4374924	6581521	26	4.3703	ng/mL	----
PFDA	Auto	4.877	738001	4374924	12	1.0033	ng/mL	----
8_2-FTS-13C_IS	Auto	4.875	392372	392372	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.875	392372	6581521	26	2.7405	ng/mL	----
8_2-FTS_1	Auto	4.875	64156	392372	15	0.9097	ng/mL	----
PFDS_1	Auto	5.037	153360	735117	13	1.0208	ng/mL	----
PFUnA	Auto	5.059	739782	5055107	14	0.9455	ng/mL	----
PFUnA-13C_IS	Auto	5.059	5055107	5055107	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.059	5055107	6581521	26	4.4161	ng/mL	----
PFDoA	Auto	5.239	806055	7445321	17	0.9904	ng/mL	----
PFDoA-13C	Auto	5.239	7445321	6581521	26	4.5200	ng/mL	----
PFDoA-13C_IS	Auto	5.239	7445321	7445321	17	5.0000	ng/mL	----
PFTrDA	Auto	5.408	1158529	6936846	22	0.8159	ng/mL	----
PFTeDA	Auto	5.563	485458	6936846	22	0.9630	ng/mL	----
PFTeDA-13C	Auto	5.563	6936846	6581521	26	5.7131	ng/mL	----
PFTeDA-13C_IS	Auto	5.563	6936846	6936846	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.217	1937586	1937586	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.217	1937586	6581521	26	4.8569	ng/mL	----
FOSA	Auto	5.217	564619	1937586	18	0.9248	ng/mL	----
N-MeFOSAA	Auto	4.985	121145	1072174	19	1.0641	ng/mL	----
N-MeFOSAA-d3	Auto	4.982	1072174	6581521	26	7.8449	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.982	1072174	1072174	19	5.0000	ng/mL	----
N-EtFOSAA	M	5.080	89375	1162229	21	0.9627	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.079	1162229	1162229	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.079	1162229	6581521	26	8.1879	ng/mL	----
13C7-PFUnDA_IS	Auto	5.059	6581521	6581521	26	5.0000	ng/mL	----

Insight Report

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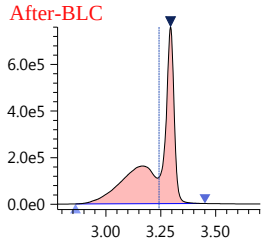
PFBA-13C_IS
Conc 5.0000
RT 3.294 Area 3753671
ISTD 216.90>172.15 (-) 7.61e5



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Conc 4.5908
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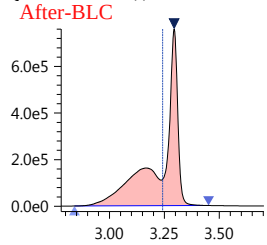
Q 216.90>172.15 (-) 7.61e5



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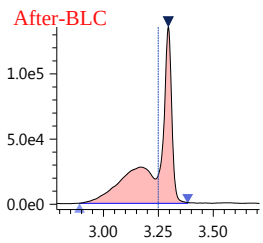
Conc 1.0100
RT 3.295 Area 646404
Q 213.00>169.10 (-) 1.36e5



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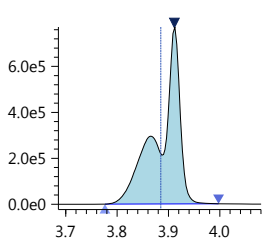
ISTD 267.90>223.00 (-) 7.72e5



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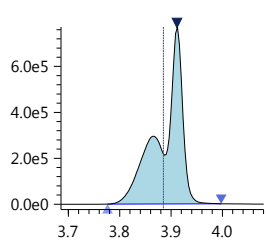

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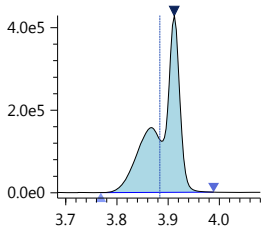

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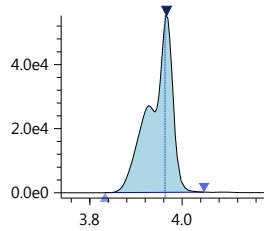
Q 299.00>80.00 (-) 5.53e4



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Conc 4.4018
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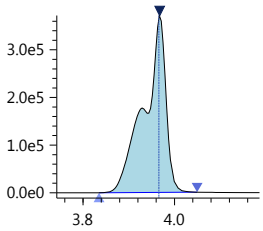
Q 301.80>80.00 (-) 3.72e5



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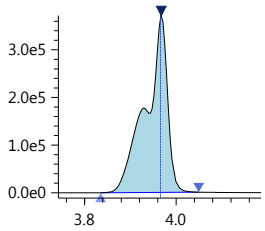
ISTD 301.80>80.00 (-) 3.72e5



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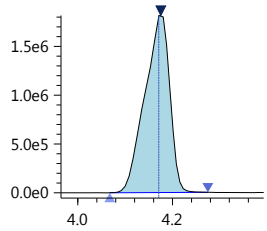
ISTD 314.90>270.10 (-) 1.82e6



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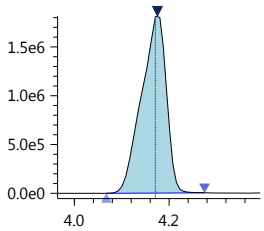
Q 314.90>270.10 (-) 1.82e6



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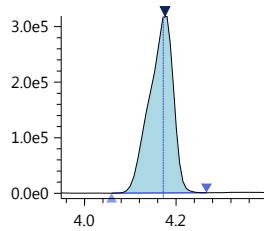

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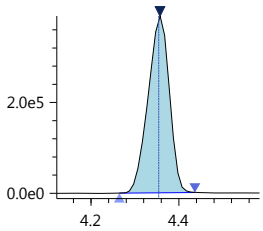

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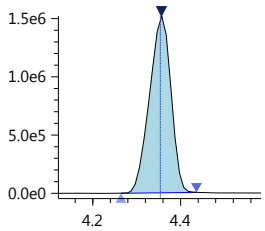
ISTD 366.90>322.10 (-) 1.52e6



PFHpA-13C
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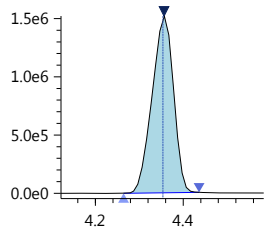

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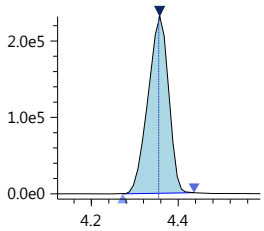

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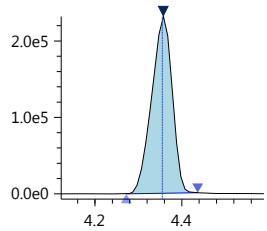

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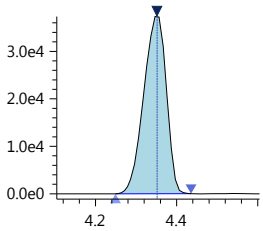

6_2-FTS-13C
Conc 2.6159
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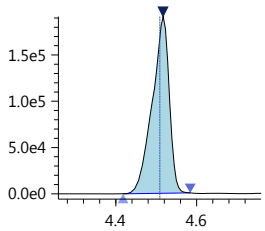

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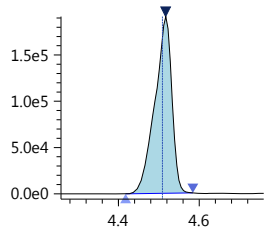

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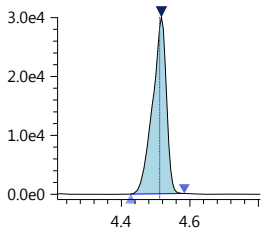

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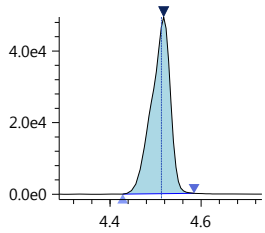

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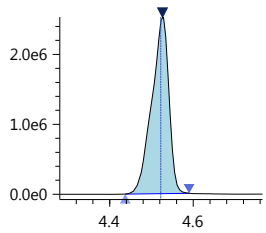
ISTD 416.80>372.05 (-) 2.54e6



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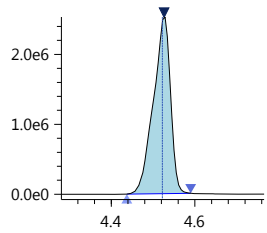
Q 416.80>372.05 (-) 2.54e6



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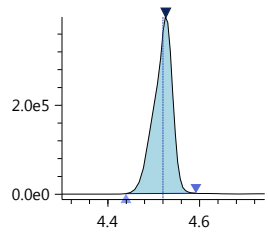

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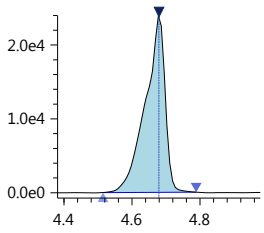
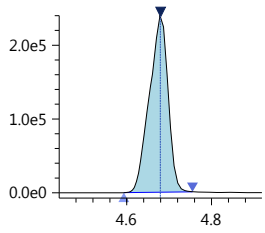
Conc 0.9364
RT 4.679 Area 96870
Q 499.00>80.00 (-) 2.40e4



PFOS-13C_IS
Conc 5.0000
RT 4.680 Area 735117
ISTD 502.80>80.05 (-) 2.40e5



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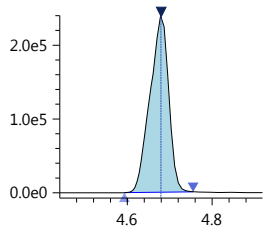
RT 4.680 Area 735117
Q 502.80>80.05 (-) 2.40e5



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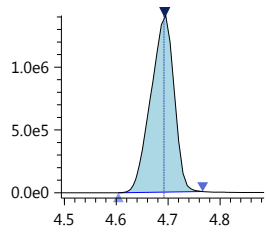

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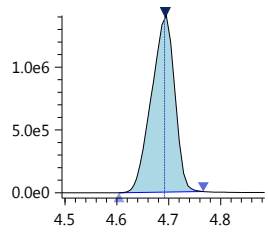

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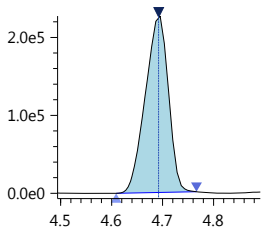
Q 463.00>418.90 (-) 2.27e5



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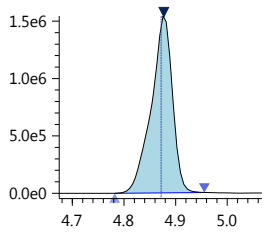

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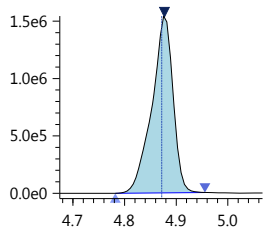

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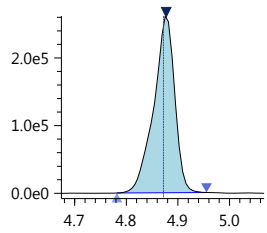
Q 513.00>468.80 (-) 2.62e5



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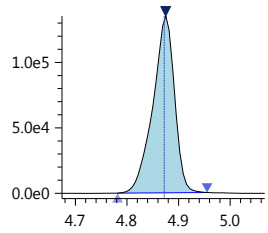
ISTD 528.80>509.00 (-) 1.35e5



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RT 4.875 Area 392372
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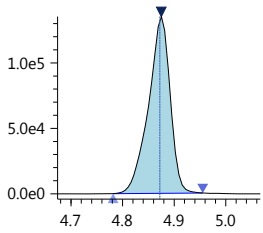

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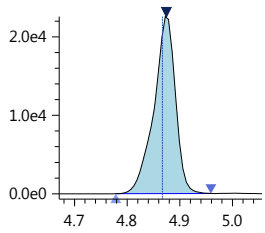

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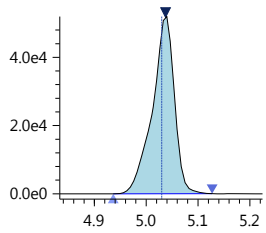
Q 599.00>79.90 (-) 5.20e4



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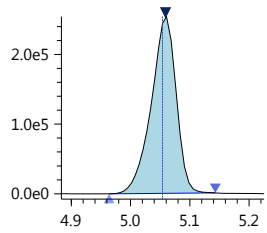

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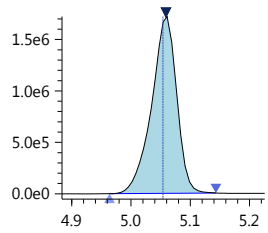

Insight Report

Printed at 1/14/2019 12:39:49 PM

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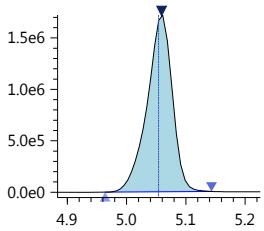
Q 564.80>519.95 (-) 1.72e6



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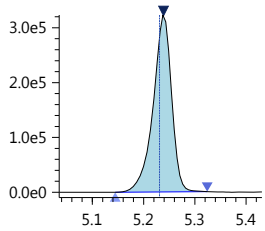

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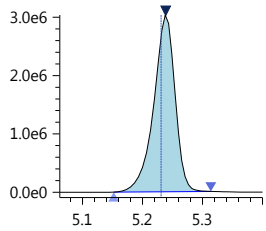
Q 614.80>569.95 (-) 3.04e6



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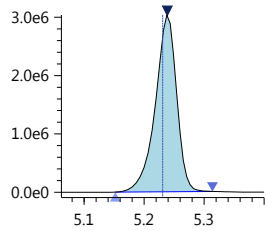

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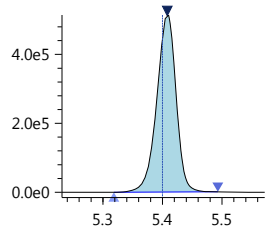

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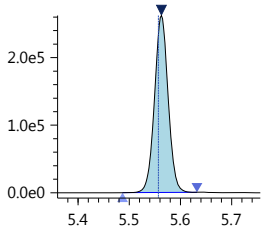
Q 713.40>669.00 (-) 2.62e5



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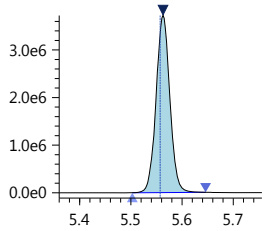

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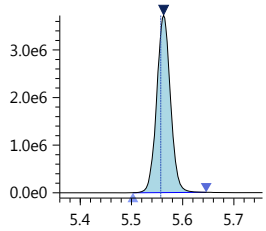

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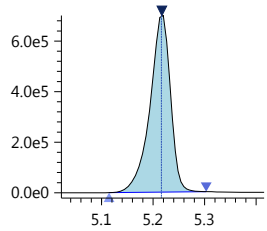

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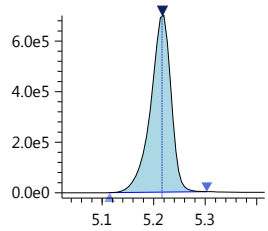

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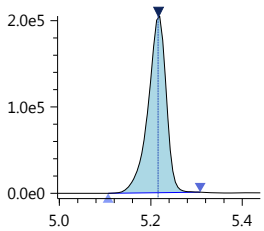

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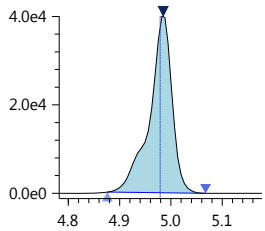

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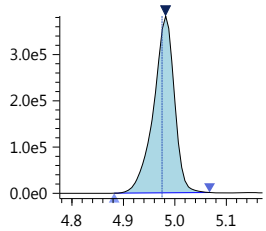

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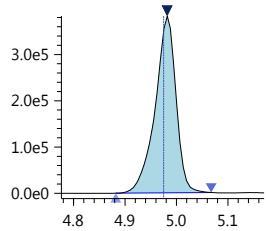

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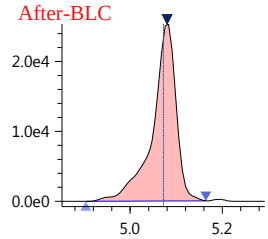

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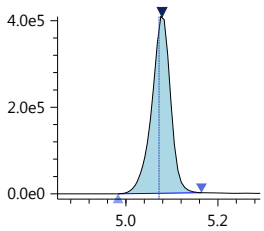

N-EtFOSAA-d5
Conc 8.1879
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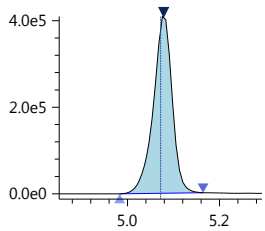
Q 588.80>419.00 (-) 4.10e5



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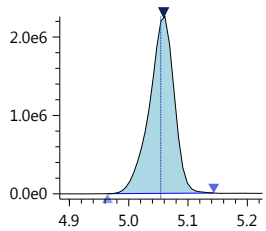

Insight Report

Printed at 1/14/2019 11:23:27 AM

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Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_053.lcd
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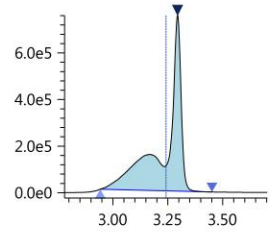

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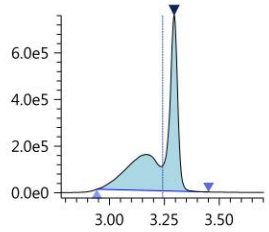

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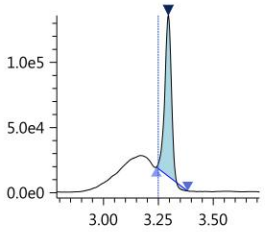

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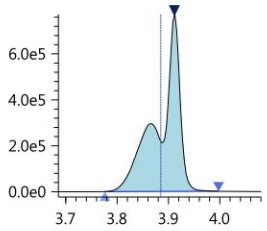

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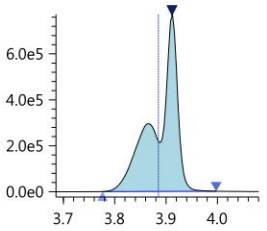

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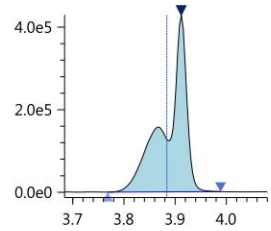

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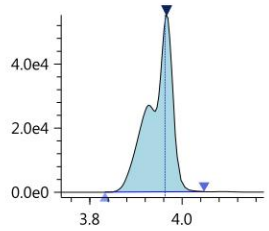

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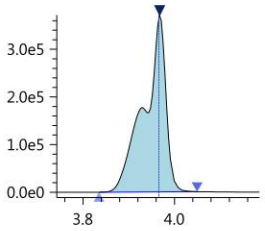

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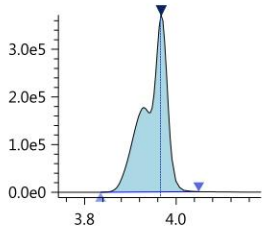

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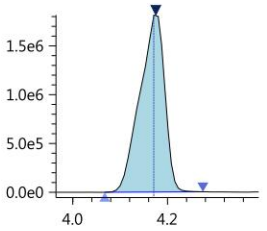

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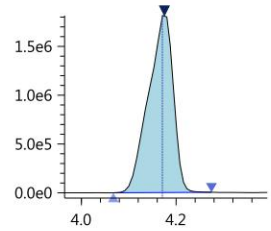

PFHxA
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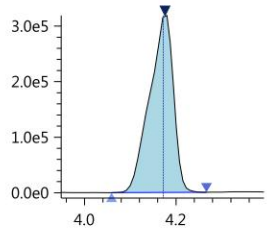
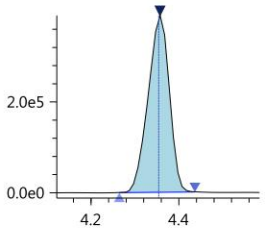
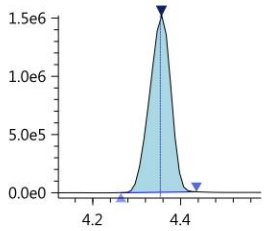
RT 4.176 Area 1156553
Q 313.00>269.00 (-) 3.19e5



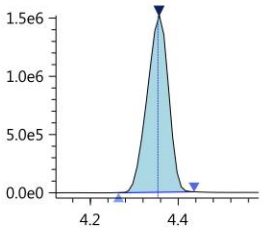
PFHpA
Conc 0.9375
RT 4.357 Area 1310384
Q 362.90>319.00 (-) 3.90e5



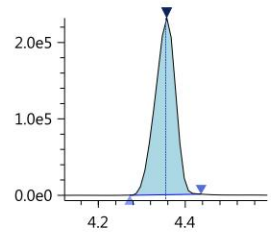
PFHpA-13C_IS
Conc 5.0000
RT 4.357 Area 5162846
ISTD 366.90>322.10 (-) 1.52e6



PFHpA-13C
Conc 4.9087
RT 4.357 Area 5162846
Q 366.90>322.10 (-) 1.52e6



PFHxS-18O_IS
Conc 5.0000
RT 4.357 Area 761932
ISTD 402.70>84.05 (-) 2.32e5



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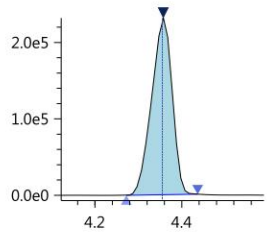
Conc 4.5836
RT 4.357 Area 761932
Q 402.70>84.05 (-) 2.32e5



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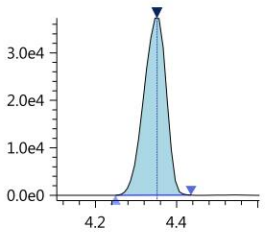
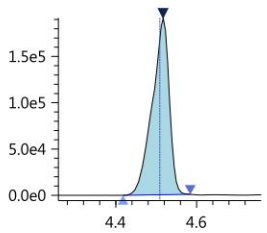
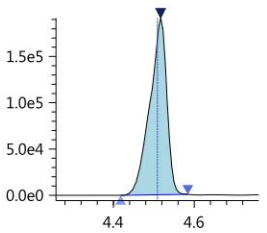
Conc 0.9212
RT 4.351 Area 145766
Q 399.00>80.00 (-) 3.73e4



6_2-FTS-13C
Conc 2.6159
RT 4.517 Area 555344
Q 428.90>409.00 (-) 1.92e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.517 Area 555344
ISTD 428.90>409.00 (-) 1.92e5



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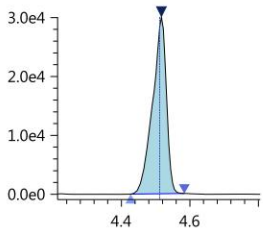
6_2-FTS_1
Conc 1.0049
RT 4.517 Area 84249
Q 427.00>407.00 (-) 3.01e4



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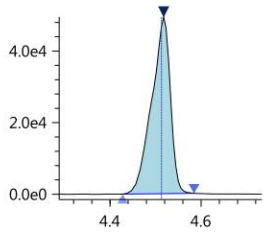
Q 449.00>80.15 (-) 4.95e4



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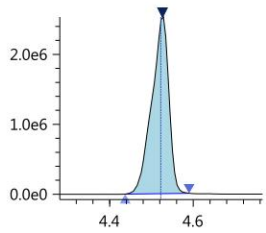
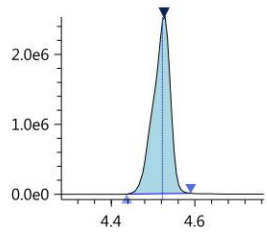
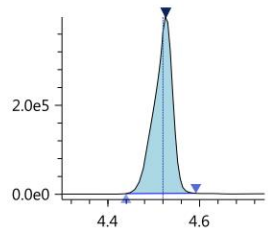
RT 4.526 Area 7173484
ISTD 416.80>372.05 (-) 2.54e6



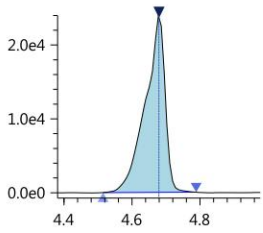
PFOA-13C
Conc 4.2897
RT 4.526 Area 7173484
Q 416.80>372.05 (-) 2.54e6



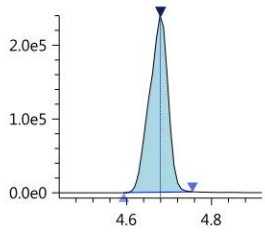
PFOA
Conc 1.0045
RT 4.526 Area 1096921
Q 413.00>369.00 (-) 3.98e5



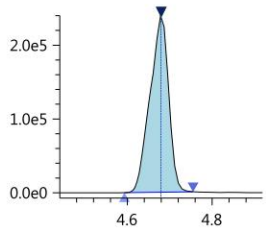
PFOS_1
Conc 0.9364
RT 4.679 Area 96870
Q 499.00>80.00 (-) 2.40e4



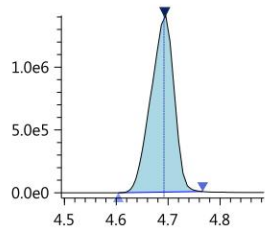
PFOS-13C_IS
Conc 5.0000
RT 4.680 Area 735117
ISTD 502.80>80.05 (-) 2.40e5



PFOS-13C
Conc 4.3447
RT 4.680 Area 735117
Q 502.80>80.05 (-) 2.40e5



PFNA-13C_IS
Conc 5.0000
RT 4.693 Area 4396552
ISTD 467.80>423.00 (-) 1.41e6



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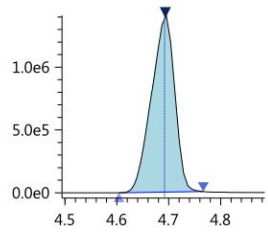
Conc 4.0315
RT 4.693 Area 4396552
Q 467.80>423.00 (-) 1.41e6



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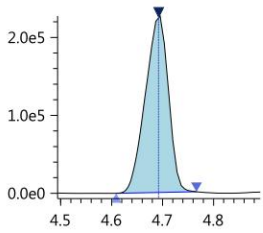
Conc 0.9789
RT 4.692 Area 712406
Q 463.00>418.90 (-) 2.27e5



PFDA-13C_IS
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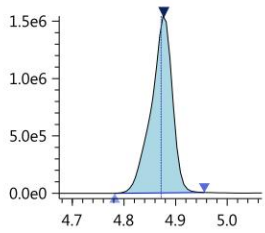
ISTD 514.80>469.95 (-) 1.54e6



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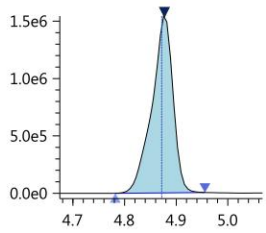
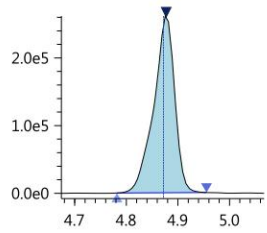
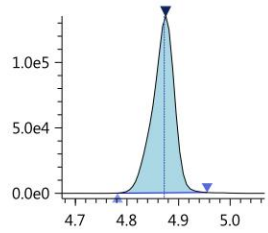
Q 514.80>469.95 (-) 1.54e6



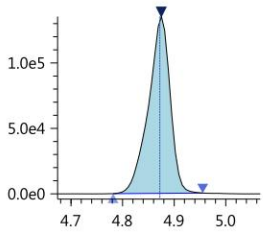
PFDA
Conc 1.0033
RT 4.877 Area 738001
Q 513.00>468.80 (-) 2.62e5



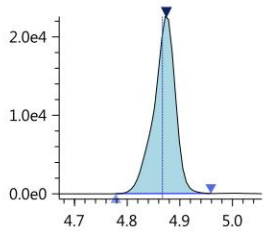
8_2-FTS-13C_IS
Conc 5.0000
RT 4.875 Area 392372
ISTD 528.80>509.00 (-) 1.35e5



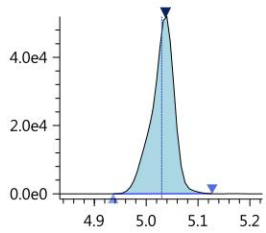
8_2-FTS-13C
Conc 2.7405
RT 4.875 Area 392372
Q 528.80>509.00 (-) 1.35e5



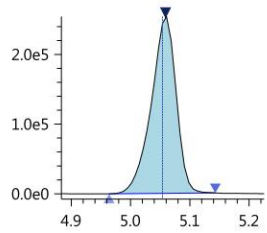
8_2-FTS_1
Conc 0.9097
RT 4.875 Area 64156
Q 527.10>506.90 (-) 2.26e4



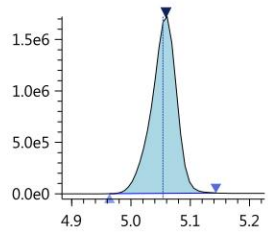
PFDS_1
Conc 1.0208
RT 5.037 Area 153360
Q 599.00>79.90 (-) 5.20e4



PFUnA
Conc 0.9455
RT 5.059 Area 739782
Q 563.00>518.90 (-) 2.54e5



PFUnA-13C_IS
Conc 5.0000
RT 5.059 Area 5055107
ISTD 564.80>519.95 (-) 1.72e6



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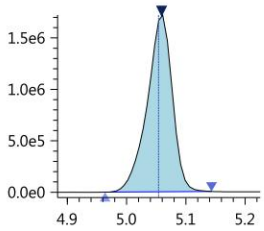
PFUnA-13C
Conc 4.4161
RT 5.059 Area 5055107
Q 564.80>519.95 (-) 1.72e6



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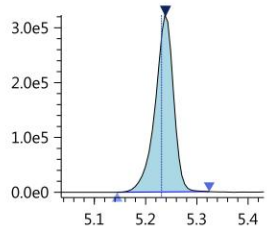
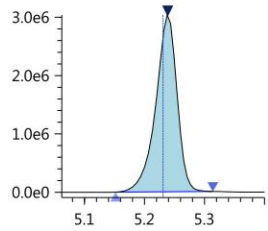
Conc 0.9904
RT 5.239 Area 806055
Q 613.05>569.00 (-) 3.23e5



PFDoA-13C
Conc 4.5200
RT 5.239 Area 7445321
Q 614.80>569.95 (-) 3.04e6



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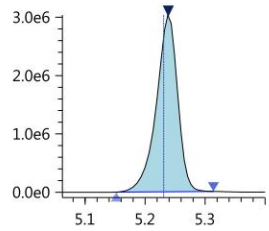
Conc 5.0000
RT 5.239 Area 7445321
ISTD 614.80>569.95 (-) 3.04e6



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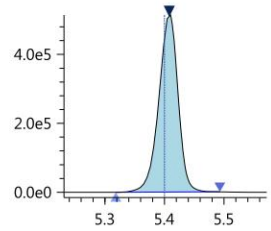
Conc 0.8159
RT 5.408 Area 1158529
Q 663.00>618.90 (-) 5.14e5



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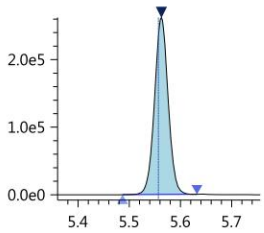
Conc 0.9630
RT 5.563 Area 485458
Q 713.40>669.00 (-) 2.62e5



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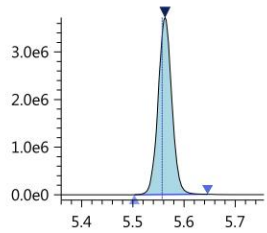
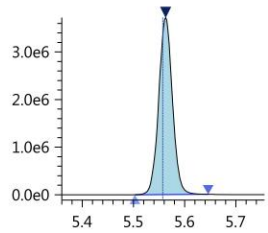
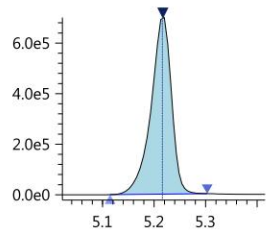
Conc 5.7131
RT 5.563 Area 6936846
Q 714.70>669.90 (-) 3.72e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.563 Area 6936846
ISTD 714.70>669.90 (-) 3.72e6



FOSA-13C_IS
Conc 5.0000
RT 5.217 Area 1937586
ISTD 506.00>78.05 (-) 7.01e5



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Conc 4.8569
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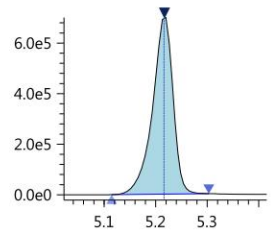
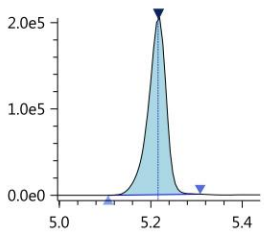
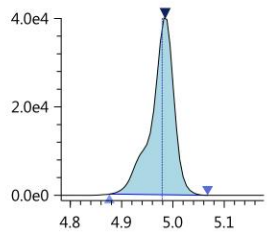
Q 506.00>78.05 (-) 7.01e5



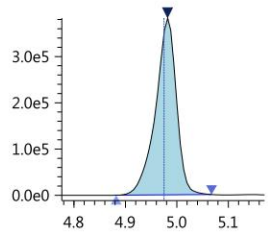
FOSA
Conc 0.9248
RT 5.217 Area 564619
Q 498.20>78.00 (-) 2.05e5



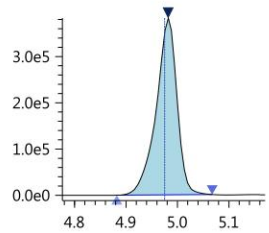
N-MeFOSAA
Conc 1.0641
RT 4.985 Area 121145
Q 570.20>419.00 (-) 4.01e4



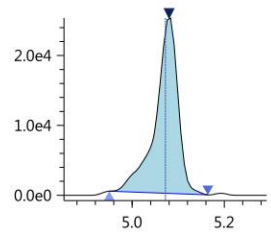
N-MeFOSAA-d3
Conc 7.8449
RT 4.982 Area 1072174
Q 572.80>419.05 (-) 3.83e5



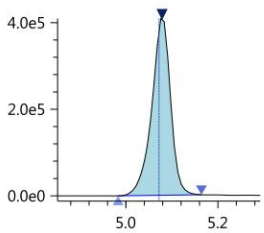
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.982 Area 1072174
ISTD 572.80>419.05 (-) 3.83e5



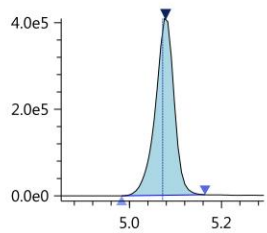
N-EtFOSAA
Conc 0.9155
RT 5.080 Area 84986
Q 584.20>418.95 (-) 2.54e4



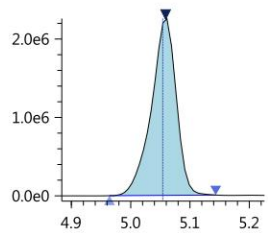
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.079 Area 1162229
ISTD 588.80>419.00 (-) 4.10e5



N-EtFOSAA-d5
Conc 8.1879
RT 5.079 Area 1162229
Q 588.80>419.00 (-) 4.10e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.059 Area 6581521
ISTD 570.00>525.00 (-) 2.26e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_130
Lab ID: KQ1818747-02
RunType: DMS
Matrix: Water

Date Acquired: 1/5/19 12:58
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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: _____

Printed: 1/18/19 10:55
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_130	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 12:58	**Vial:**	12
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818747-02	**Raw Units:**	ng/mL

Bottle ID:	R1812115-005.03	**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/13/18	**Receive Date:**	12/13/18

Analysis Lot:	621097	**Prep Lot:**	328931	**Report Group:**	KQ1818747
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	12/27/18		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.077	+0.00	4118488	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.977	0.00	610028	3.7012	74	20 - 109	Y
18O2-PFHxS	4.372	+0.00	571520	5.0262	101	26 - 122	Y
13C4-PFOS	4.695	+0.00	457499	3.8550	77	25 - 121	Y
13C4-PFBA	3.317	-0.01	2517191	4.7632	95	27 - 124	Y
13C5-PFPeA	3.922		1432286	4.8635	97	27 - 138	Y
13C2-PFHxA	4.189	+0.00	5198493	5.2862	106	28 - 132	Y
13C4-PFHpA	4.373	+0.00	3302710	4.4770	90	19 - 139	Y
13C4-PFOA	4.539	+0.00	4003963	4.0718	81	22 - 130	Y
13C5-PFNA	4.709	+0.00	3712967	4.5380	91	20 - 127	Y
13C2-PFDA	4.894	+0.00	2964473	4.1504	83	24 - 125	Y
13C2-PFUnDA	5.077	+0.00	2143305	3.2070	64	22 - 125	Y
13C2-PFDoDA	5.257	+0.00	3065147	3.1609	63	19 - 122	Y
13C2-PFTeDA	5.580	+0.00	2236961	3.2239	64	13 - 124	Y
13C8-FOSA	5.233	+0.01	1106786	3.5050	70	18 - 109	Y
D3-MeFOSAA	5.000	+0.01	386602	3.0935	62	9 - 123	Y
D5-EtFOSAA	5.096	+0.00	404116	3.3682	67	12 - 126	Y
13C2-6:2 FTS	4.529	+0.00	390131	3.8135	76	10 - 226	Y
13C2-8:2 FTS	4.892	+0.00	274091	3.4451	69	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)	3.976		144668	1.1642	30.0		Y
Perfluorohexane sulfonic acid (PFHxS)	4.370	+0.00	128426	1.1662	30.1		Y

1st CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_130	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 12:58	**Vial:**	12
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1818747-02	**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)	4.530	+0.00	110197	0.9566	24.7		Y
Perfluorooctane sulfonic acid (PFOS)	4.695	+0.00	80945	1.1997	31.0		Y
Perfluorodecane sulfonic acid (PFDS)	5.054	+0.00	62251	0.7400	19.1		Y
Perfluorobutanoic acid (PFBA)	3.318	-0.01	922398	2.0775	53.6		Y
Perfluoropentanoic acid (PFPeA)	3.922		1075841	1.4560	37.6		Y
Perfluorohexanoic acid (PFHxA)	4.188	+0.00	1679097	1.8302	47.2		Y
Perfluoroheptanoic acid (PFHpA)	4.373	+0.01	890481	1.2619	32.6		Y
Perfluorooctanoic acid (PFOA)	4.539	+0.00	1184759	1.8042	46.6		Y
Perfluorononanoic acid (PFNA)	4.710	+0.00	454947	0.9228	23.8		Y
Perfluorodecanoic acid (PFDA)	4.894	+0.00	513917	1.0354	26.7		Y
Perfluoroundecanoic acid (PFUnDA)	5.077	+0.00	379350	1.0951	28.3		Y
Perfluorododecanoic acid (PFDoDA)	5.256	+0.00	408869	1.2278	31.7		Y
Perfluorotridecanoic acid (PFTrDA)	5.428	+0.00	429906	1.0700	27.6		Y
Perfluorotetradecanoic acid (PFTeDA)	5.579	+0.00	179432	1.1939	30.8		Y
Perfluorooctane sulfonamide (FOSA)	5.233	+0.01	312545	1.0570	27.3		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.002	+0.00	46698	1.1523	29.7		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.100	+0.00	42399	1.1662	30.1		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.529	+0.00	90129	1.2502	32.3		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.891	+0.00	47217	0.9772	25.2		Y

Prep Amount:	310.0000 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 1/18/2019 10:42:01 AM

010419_130

Sample ID: KQ1818747-02
Date acquired: 1/5/2019 12:58:33 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_130.lcd
Vial: 32 | Inj. Volume: 15.0000uL | Tray: 4

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.317	2517191	2517191	2	5.0000	ng/mL	----
PFBA-13C	M	3.317	2517191	4118488	26	4.7632	ng/mL	----
PFBA	M	3.318	922398	2517191	2	2.0775	ng/mL	----
PFPeA-13C_IS	Auto	3.922	1432286	1432286	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.922	1432286	4118488	26	4.8635	ng/mL	----
PFPeA	Auto	3.922	1075841	1432286	4	1.4560	ng/mL	----
PFBS_1	Auto	3.976	144668	610028	16	1.1642	ng/mL	----
PFBS-13C	Auto	3.977	610028	4118488	26	3.7012	ng/mL	----
PFBS-13C_IS	Auto	3.977	610028	610028	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.189	5198493	5198493	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.189	5198493	4118488	26	5.2862	ng/mL	----
PFHxA	Auto	4.188	1679097	5198493	6	1.8302	ng/mL	----
PFHpA	Auto	4.373	890481	3302710	8	1.2619	ng/mL	----
PFHpA-13C_IS	Auto	4.373	3302710	3302710	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.373	3302710	4118488	26	4.4770	ng/mL	----
PFHxS-18O_IS	Auto	4.372	571520	571520	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.372	571520	4118488	26	5.0262	ng/mL	----
PFHxS_1	Auto	4.370	128426	571520	7	1.1662	ng/mL	----
6_2-FTS-13C	Auto	4.529	390131	4118488	26	3.8135	ng/mL	----
6_2-FTS-13C_IS	Auto	4.529	390131	390131	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.529	90129	390131	10	1.2502	ng/mL	----
PFHpS_1	Auto	4.530	110197	571520	7	0.9566	ng/mL	----
PFOA-13C_IS	Auto	4.539	4003963	4003963	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.539	4003963	4118488	26	4.0718	ng/mL	----
PFOA	Auto	4.539	1184759	4003963	9	1.8042	ng/mL	----
PFOS_1	Auto	4.695	80945	457499	13	1.1997	ng/mL	----
PFOS-13C_IS	Auto	4.695	457499	457499	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.695	457499	4118488	26	3.8550	ng/mL	----
PFNA-13C_IS	Auto	4.709	3712967	3712967	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.709	3712967	4118488	26	4.5380	ng/mL	----
PFNA	Auto	4.710	454947	3712967	11	0.9228	ng/mL	----
PFDA-13C_IS	Auto	4.894	2964473	2964473	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.894	2964473	4118488	26	4.1504	ng/mL	----
PFDA	Auto	4.894	513917	2964473	12	1.0354	ng/mL	----
8_2-FTS-13C_IS	Auto	4.892	274091	274091	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.892	274091	4118488	26	3.4451	ng/mL	----
8_2-FTS_1	Auto	4.891	47217	274091	15	0.9772	ng/mL	----
PFDS_1	Auto	5.054	62251	457499	13	0.7400	ng/mL	----
PFUnA	Auto	5.077	379350	2143305	14	1.0951	ng/mL	----
PFUnA-13C_IS	Auto	5.077	2143305	2143305	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.077	2143305	4118488	26	3.2070	ng/mL	----
PFDoA	Auto	5.256	408869	3065147	17	1.2278	ng/mL	----
PFDoA-13C	Auto	5.257	3065147	4118488	26	3.1609	ng/mL	----
PFDoA-13C_IS	Auto	5.257	3065147	3065147	17	5.0000	ng/mL	----
PFTrDA	Auto	5.428	429906	2236961	22	1.0700	ng/mL	----
PFTeDA	Auto	5.579	179432	2236961	22	1.1939	ng/mL	----
PFTeDA-13C	Auto	5.580	2236961	4118488	26	3.2239	ng/mL	----
PFTeDA-13C_IS	Auto	5.580	2236961	2236961	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.233	1106786	1106786	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.233	1106786	4118488	26	3.5050	ng/mL	----
FOSA	Auto	5.233	312545	1106786	18	1.0570	ng/mL	----
N-MeFOSAA	M	5.002	46698	386602	19	1.1523	ng/mL	----
N-MeFOSAA-d3	Auto	5.000	386602	4118488	26	3.0935	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.000	386602	386602	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.625	349253	349253	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.625	349253	4118488	26	3.8868	ng/mL	----
N-MeFOSA	Auto	5.628	98340	349253	1	1.0663	ng/mL	----
N-MeFOSE-d7	Auto	5.596	466523	4118488	26	3.5741	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.596	466523	466523	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.604	143431	466523	20	1.0582	ng/mL	----
N-EtFOSAA	Auto	5.100	42399	404116	21	1.1662	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.096	404116	404116	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.096	404116	4118488	26	3.3682	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.763	519377	519377	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.763	519377	4118488	26	3.4471	ng/mL	----
N-EtFOSA	Auto	5.768	18976	519377	23	1.0308	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.728	489239	489239	24	5.0000	ng/mL	----

Insight Report

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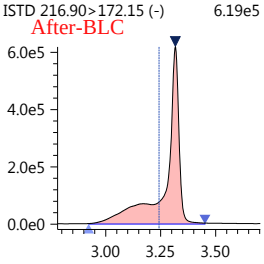
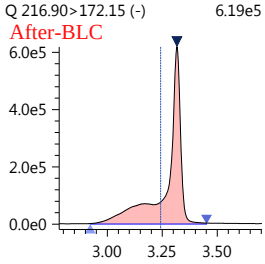
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.728	489239	4118488	26	3.4729	ng/mL	----
N-EtFOSE	Auto	5.739	109200	489239	24	0.9177	ng/mL	----
13C7-PFUnDA_IS	Auto	5.077	4118488	4118488	26	5.0000	ng/mL	----

PFBA-13C_IS
Conc 5.0000
RT 3.317 Area 2517191
ISTD 216.90>172.15 (-) 6.19e5



PFBA-13C
Conc 4.7632
RT 3.317 Area 2517191
Q 216.90>172.15 (-) 6.19e5



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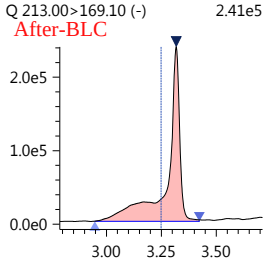
Conc 2.0775
RT 3.318 Area 922398
Q 213.00>169.10 (-) 2.41e5



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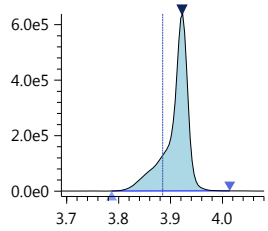

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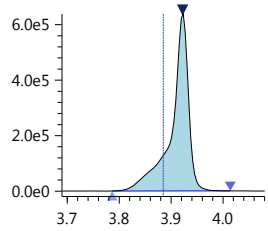

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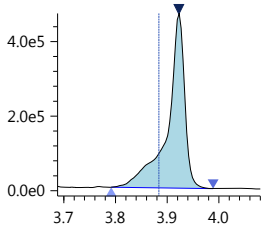
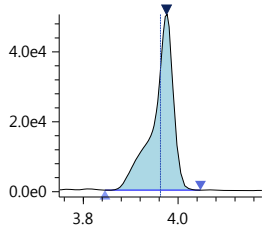
Conc 1.4560
RT 3.922 Area 1075841
Q 263.05>219.10 (-) 4.76e5



PFBS_1
Conc 1.1642
RT 3.976 Area 144668
Q 299.00>80.00 (-) 5.07e4



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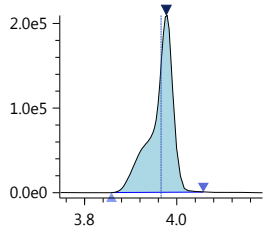
Q 301.80>80.00 (-) 2.10e5



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Conc 5.0000
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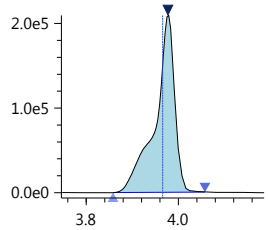
ISTD 301.80>80.00 (-) 2.10e5



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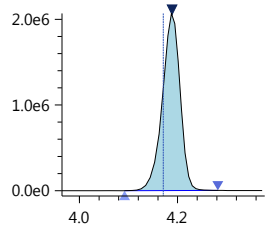
Conc 5.0000
RT 4.189 Area 5198493
ISTD 314.90>270.10 (-) 2.07e6



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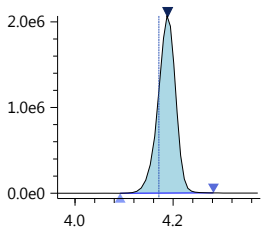

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Conc 1.8302
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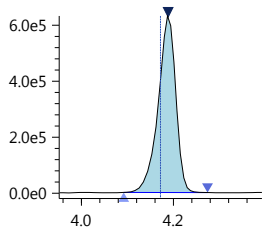
Q 313.00>269.00 (-) 6.33e5



PFHpA
Conc 1.2619
RT 4.373 Area 890481
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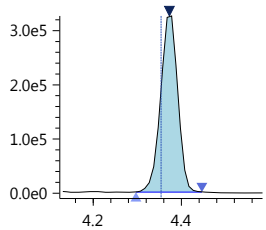
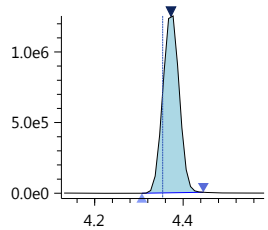
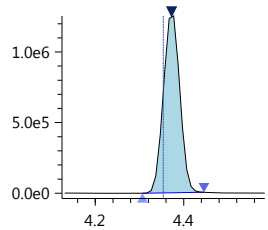


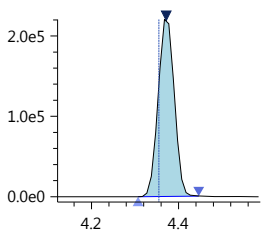
PFHpA-13C_IS
Conc 5.0000
RT 4.373 Area 3302710
ISTD 366.90>322.10 (-) 1.26e6



PFHpA-13C
Conc 4.4770
RT 4.373 Area 3302710
Q 366.90>322.10 (-) 1.26e6



PFHxS-18O_IS
Conc 5.0000
RT 4.372 Area 571520
ISTD 402.70>84.05 (-) 2.21e5



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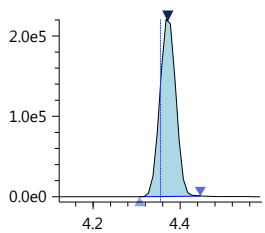
Conc 5.0262
RT 4.372 Area 571520
Q 402.70>84.05 (-) 2.21e5



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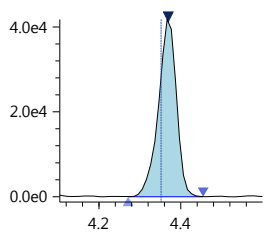
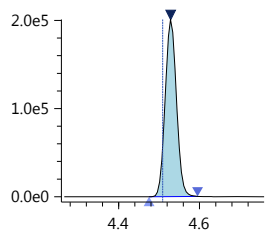
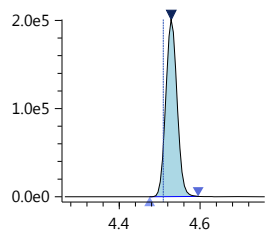
Conc 1.1662
RT 4.370 Area 128426
Q 399.00>80.00 (-) 4.18e4



6_2-FTS-13C
Conc 3.8135
RT 4.529 Area 390131
Q 428.90>409.00 (-) 2.01e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.529 Area 390131
ISTD 428.90>409.00 (-) 2.01e5



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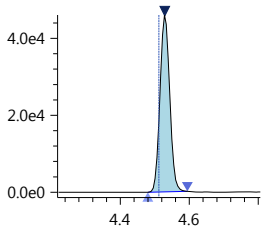
6_2-FTS_1
Conc 1.2502
RT 4.529 Area 90129
Q 427.00>407.00 (-) 4.61e4



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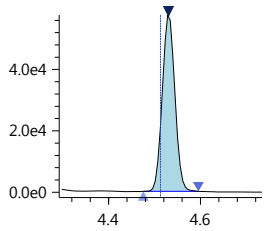
Q 449.00>80.15 (-) 5.77e4



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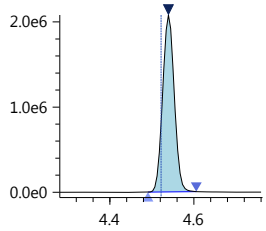
RT 4.539 Area 4003963
ISTD 416.80>372.05 (-) 2.08e6



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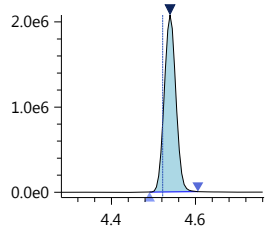
Q 416.80>372.05 (-) 2.08e6



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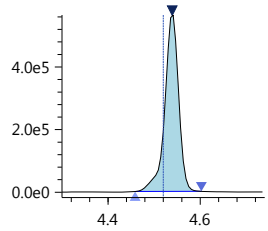

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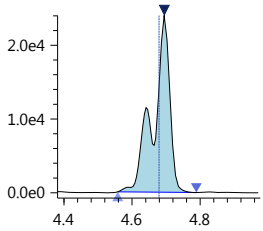
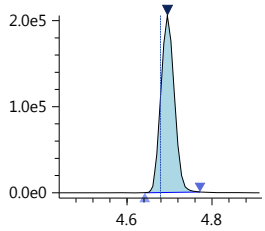
Conc 1.1997
RT 4.695 Area 80945
Q 499.00>80.00 (-) 2.40e4



PFOS-13C_IS
Conc 5.0000
RT 4.695 Area 457499
ISTD 502.80>80.05 (-) 2.06e5



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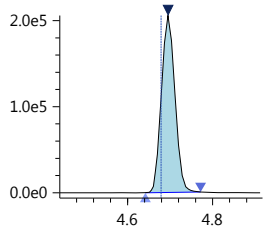
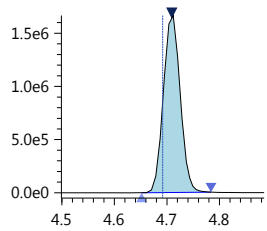
Q 502.80>80.05 (-) 2.06e5



PFNA-13C_IS
Conc 5.0000
RT 4.709 Area 3712967
ISTD 467.80>423.00 (-) 1.67e6



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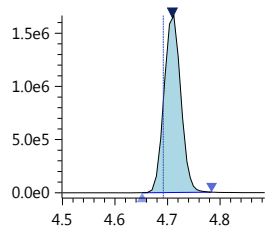
RT 4.709 Area 3712967
Q 467.80>423.00 (-) 1.67e6



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Conc 0.9228
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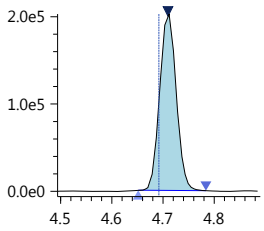
Q 463.00>418.90 (-) 2.03e5



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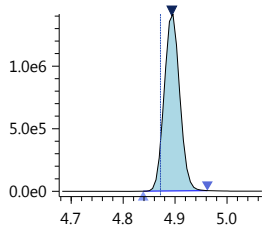
Conc 5.0000
RT 4.894 Area 2964473
ISTD 514.80>469.95 (-) 1.42e6



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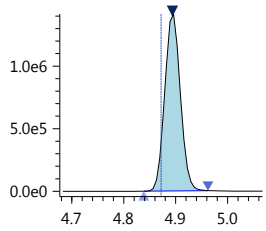
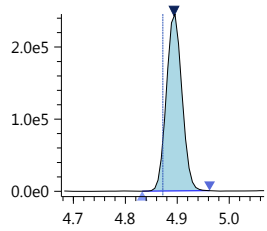
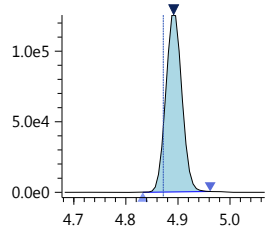
Conc 4.1504
RT 4.894 Area 2964473
Q 514.80>469.95 (-) 1.42e6



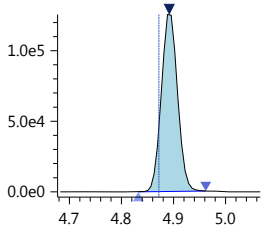
PFDA
Conc 1.0354
RT 4.894 Area 513917
Q 513.00>468.80 (-) 2.46e5



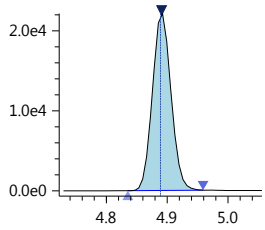
8_2-FTS-13C_IS
Conc 5.0000
RT 4.892 Area 274091
ISTD 528.80>509.00 (-) 1.26e5



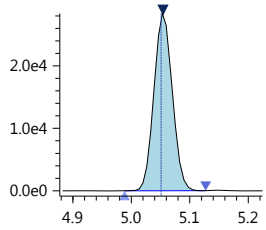
8_2-FTS-13C
Conc 3.4451
RT 4.892 Area 274091
Q 528.80>509.00 (-) 1.26e5



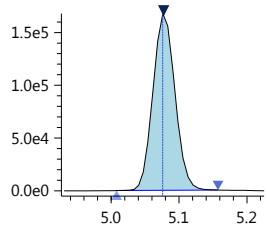
8_2-FTS_1
Conc 0.9772
RT 4.891 Area 47217
Q 527.10>506.90 (-) 2.22e4



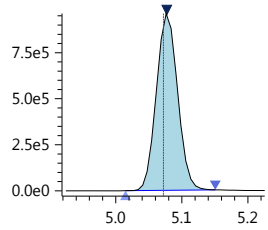
PFDS_1
Conc 0.7400
RT 5.054 Area 62251
Q 599.00>79.90 (-) 2.84e4



PFUnA
Conc 1.0951
RT 5.077 Area 379350
Q 563.00>518.90 (-) 1.68e5



PFUnA-13C_IS
Conc 5.0000
RT 5.077 Area 2143305
ISTD 564.80>519.95 (-) 9.63e5



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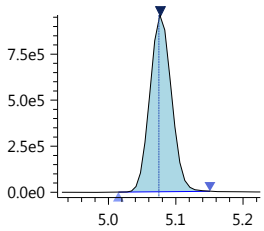
RT 5.077 Area 2143305
Q 564.80>519.95 (-) 9.63e5



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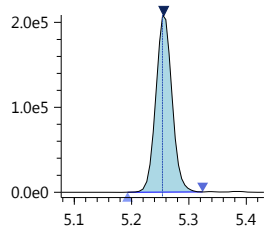
Conc 1.2278
RT 5.256 Area 408869
Q 613.05>569.00 (-) 2.09e5



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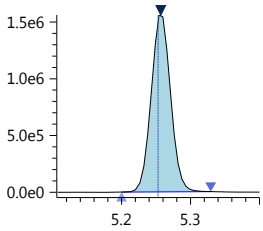
Conc 3.1609
RT 5.257 Area 3065147
Q 614.80>569.95 (-) 1.56e6



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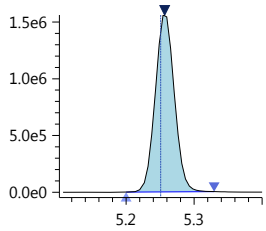
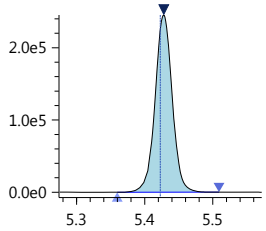
ISTD 614.80>569.95 (-) 1.56e6



PFTrDA
Conc 1.0700
RT 5.428 Area 429906
Q 663.00>618.90 (-) 2.45e5



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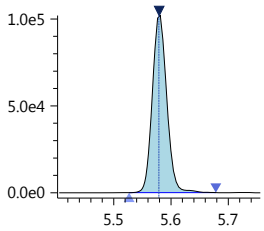
Conc 1.1939
RT 5.579 Area 179432
Q 713.40>669.00 (-) 1.02e5



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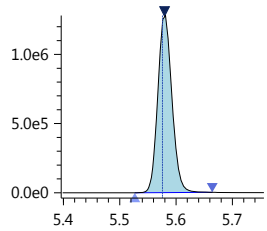
Conc 3.2239
RT 5.580 Area 2236961
Q 714.70>669.90 (-) 1.28e6



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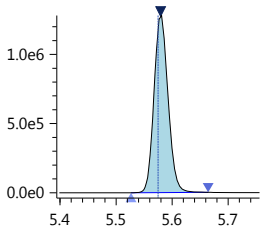
RT 5.580 Area 2236961
ISTD 714.70>669.90 (-) 1.28e6



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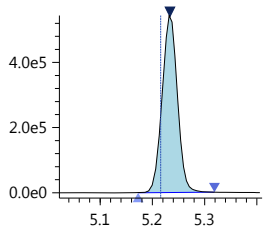
Conc 5.0000
RT 5.233 Area 1106786
ISTD 506.00>78.05 (-) 5.44e5



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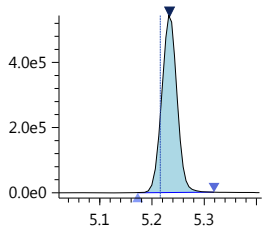
Q 506.00>78.05 (-) 5.44e5



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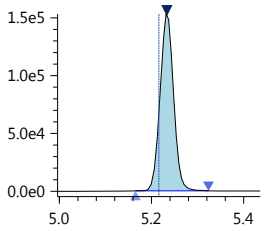
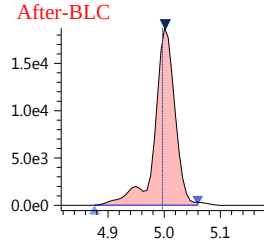
RT 5.233 Area 312545
Q 498.20>78.00 (-) 1.53e5



N-MeFOSAA
Conc 1.1523
RT 5.002 Area 46698
Q 570.20>419.00 (-) 1.87e4
After-BLC



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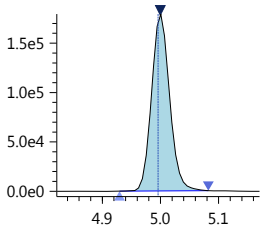
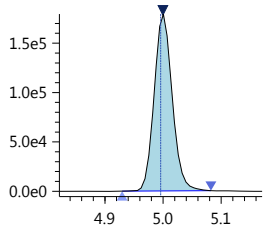
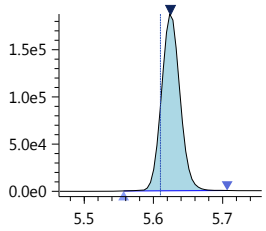
Conc 3.0935
RT 5.000 Area 386602
Q 572.80>419.05 (-) 1.80e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.000 Area 386602
ISTD 572.80>419.05 (-) 1.80e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.625 Area 349253
ISTD 514.90>168.90 (-) 1.88e5



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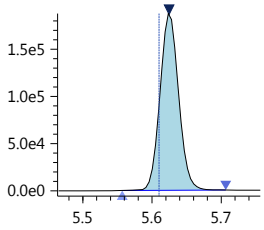
RT 5.625 Area 349253
Q 514.90>168.90 (-) 1.88e5



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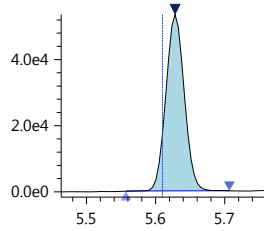
Q 512.00>169.10 (-) 5.36e4



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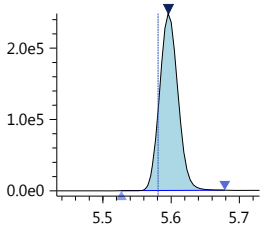
RT 5.596 Area 466523
Q 622.70>59.10 (-) 2.49e5



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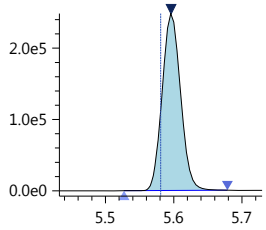
Conc 5.0000
RT 5.596 Area 466523
ISTD 622.70>59.10 (-) 2.49e5



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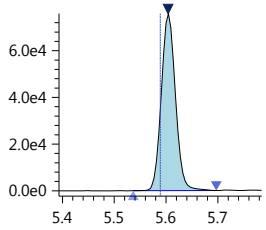

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Printed at 1/18/2019 10:42:01 AM

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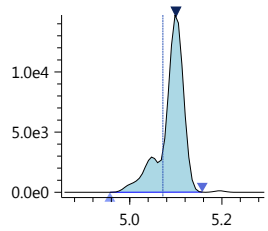

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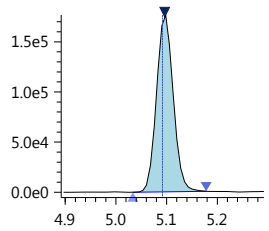

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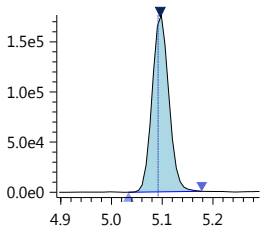

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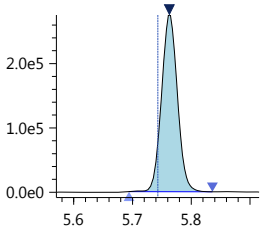

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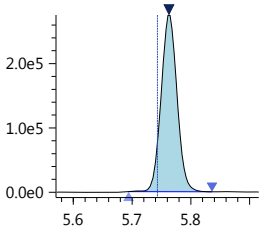

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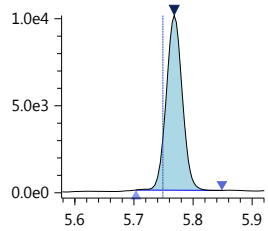
Q 526.90>169.10 (-) 1.02e4



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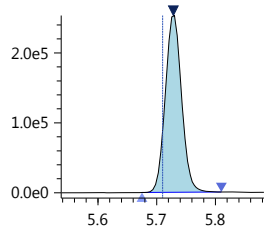

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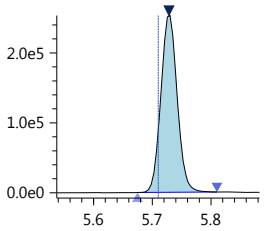

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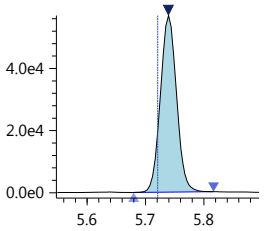
Q 630.00>58.90 (-) 5.70e4



13C7-PFUnDA_IS
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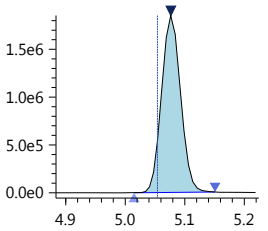

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Printed at 1/18/2019 8:51:07 AM

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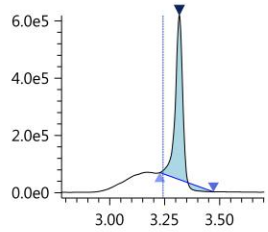

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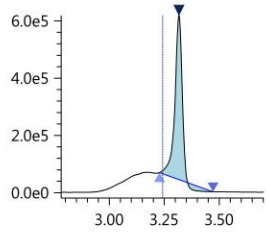

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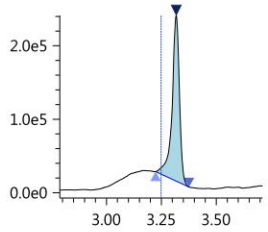

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Conc 5.0000
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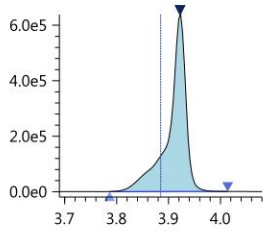
ISTD 267.90>223.00 (-) 6.39e5



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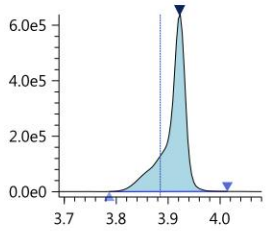

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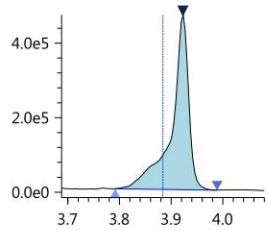

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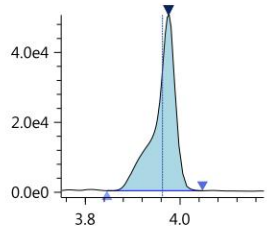
Q 299.00>80.00 (-) 5.07e4



PFBS-13C
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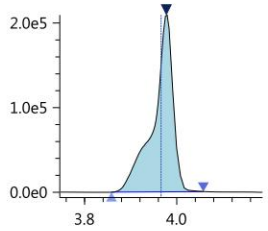
Q 301.80>80.00 (-) 2.10e5



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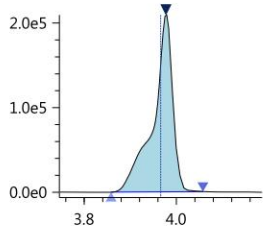

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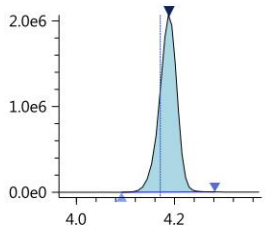

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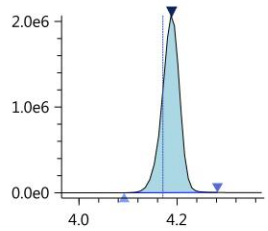

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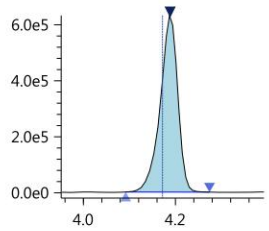

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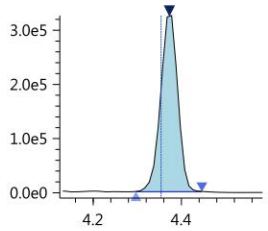
Q 362.90>319.00 (-) 3.27e5



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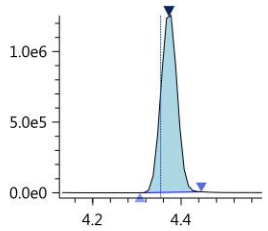

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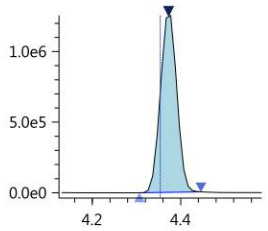

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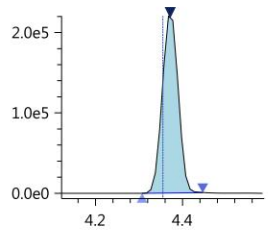

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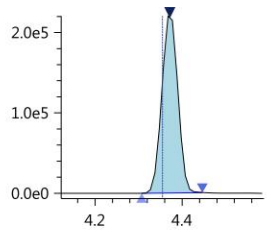

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RT 4.370 Area 128426
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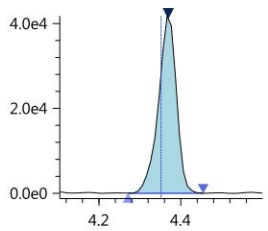

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Conc 3.8135
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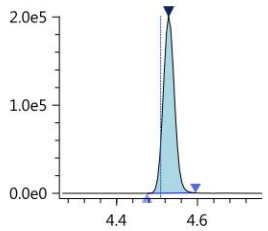
Q 428.90>409.00 (-) 2.01e5



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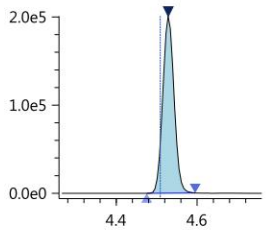

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Printed at 1/18/2019 8:51:07 AM

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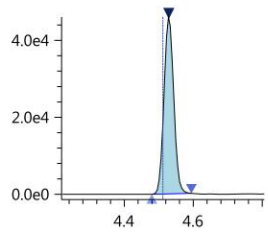

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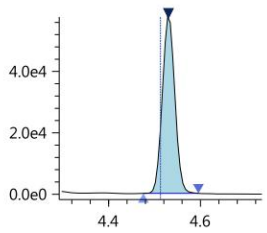

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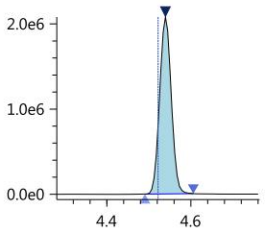

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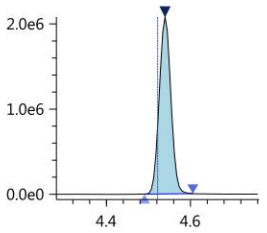

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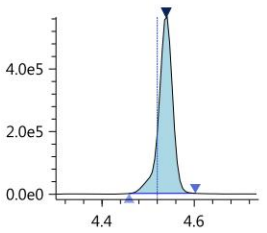

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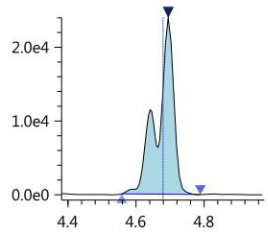
Q 499.00>80.00 (-) 2.40e4



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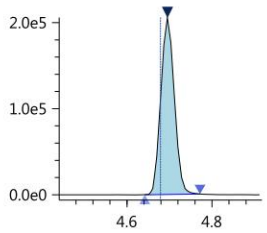
ISTD 502.80>80.05 (-) 2.06e5



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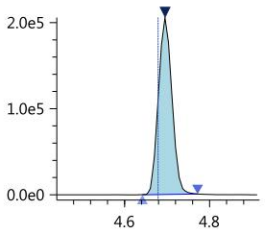

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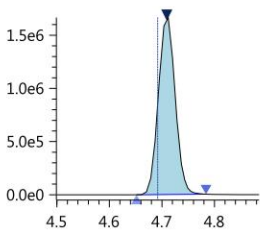

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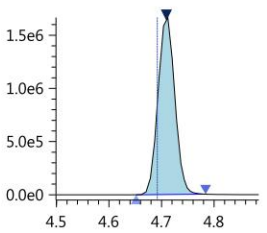

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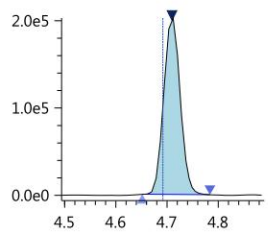
Q 463.00>418.90 (-) 2.03e5



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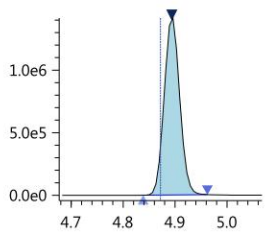

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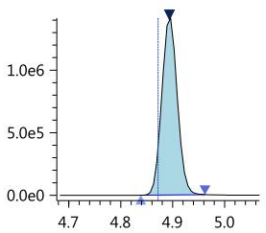
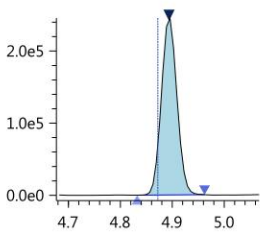
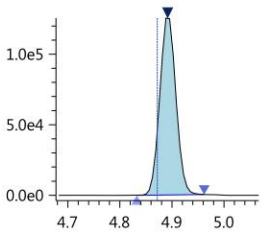
Conc 4.1504
RT 4.894 Area 2964473
Q 514.80>469.95 (-) 1.42e6



PFDA
Conc 1.0354
RT 4.894 Area 513917
Q 513.00>468.80 (-) 2.46e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.892 Area 274091
ISTD 528.80>509.00 (-) 1.26e5



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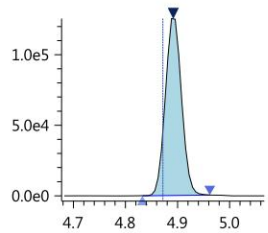
RT 4.892 Area 274091
Q 528.80>509.00 (-) 1.26e5



8_2-FTS_1
Conc 0.9772
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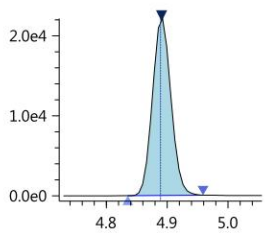
Q 527.10>506.90 (-) 2.22e4



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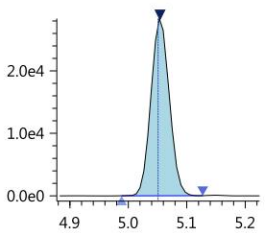
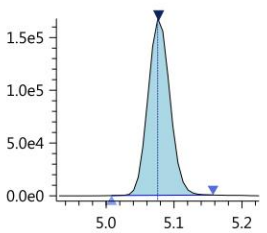
Conc 0.7400
RT 5.054 Area 62251
Q 599.00>79.90 (-) 2.84e4



PFUnA
Conc 1.0951
RT 5.077 Area 379350
Q 563.00>518.90 (-) 1.68e5



PFUnA-13C_IS
Conc 5.0000
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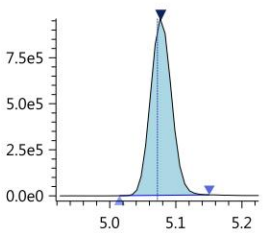
ISTD 564.80>519.95 (-) 9.63e5



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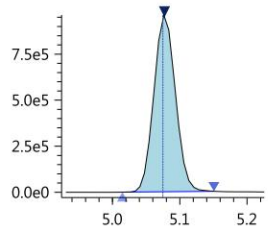
PFUnA-13C
Conc 3.2070
RT 5.077 Area 2143305
Q 564.80>519.95 (-) 9.63e5



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Conc 1.2278
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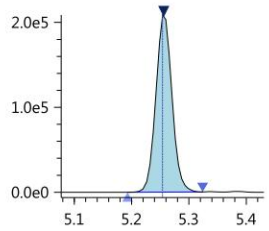

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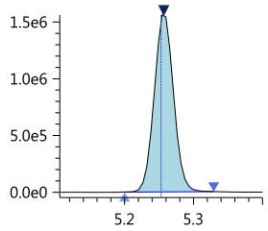
Conc 3.1609
RT 5.257 Area 3065147
Q 614.80>569.95 (-) 1.56e6



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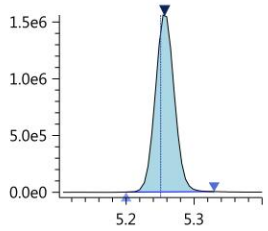
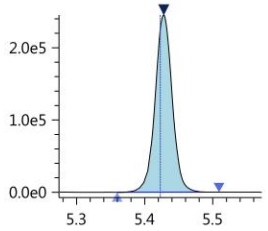


PFTrDA
Conc 1.0700
RT 5.428 Area 429906
Q 663.00>618.90 (-) 2.45e5



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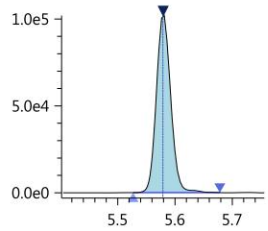
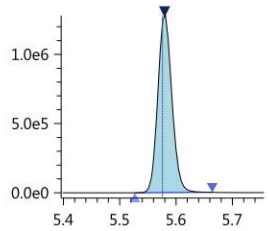
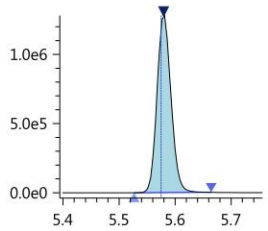
Conc 1.1939
RT 5.579 Area 179432
Q 713.40>669.00 (-) 1.02e5



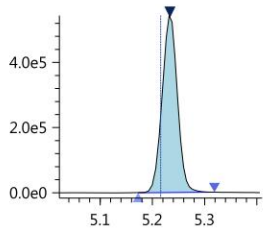
PFTeDA-13C
Conc 3.2239
RT 5.580 Area 2236961
Q 714.70>669.90 (-) 1.28e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.580 Area 2236961
ISTD 714.70>669.90 (-) 1.28e6



FOSA-13C_IS
Conc 5.0000
RT 5.233 Area 1106786
ISTD 506.00>78.05 (-) 5.44e5



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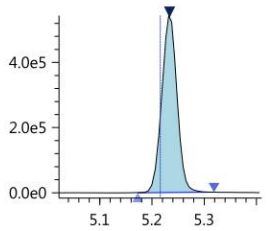

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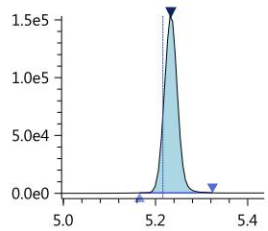
Q 498.20>78.00 (-) 1.53e5



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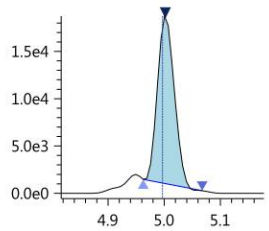
Conc 0.9121
RT 5.002 Area 36966
Q 570.20>419.00 (-) 1.87e4



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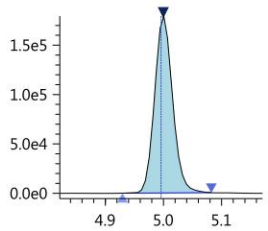
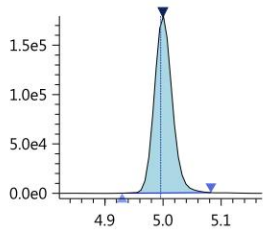
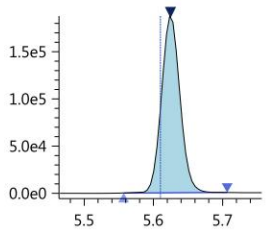
Conc 3.0935
RT 5.000 Area 386602
Q 572.80>419.05 (-) 1.80e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.000 Area 386602
ISTD 572.80>419.05 (-) 1.80e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.625 Area 349253
ISTD 514.90>168.90 (-) 1.88e5



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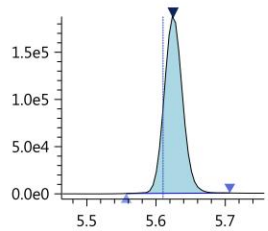
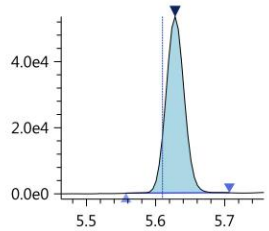
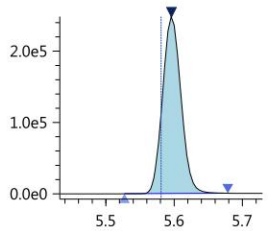
Conc 3.8868
RT 5.625 Area 349253
Q 514.90>168.90 (-) 1.88e5



N-MeFOSA
Conc 1.0663
RT 5.628 Area 98340
Q 512.00>169.10 (-) 5.36e4



N-MeFOSE-d7
Conc 3.5741
RT 5.596 Area 466523
Q 622.70>59.10 (-) 2.49e5



N-MeFOSE-d7_IS
Conc 5.0000
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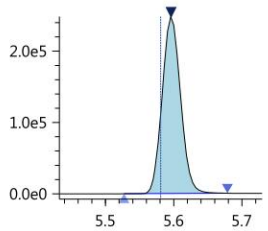
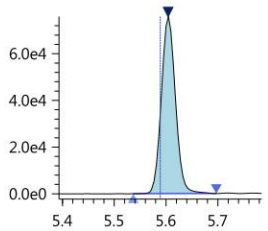
ISTD 622.70>59.10 (-) 2.49e5



N-MeFOSE
Conc 1.0582
RT 5.604 Area 143431
Q 616.00>59.00 (-) 7.59e4



Insight Report

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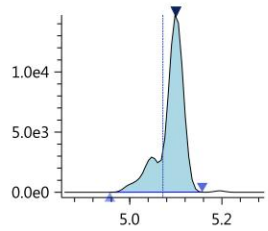
Conc 1.1662
RT 5.100 Area 42399
Q 584.20>418.95 (-) 1.47e4



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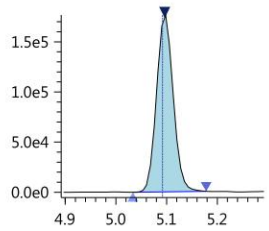
ISTD 588.80>419.00 (-) 1.77e5



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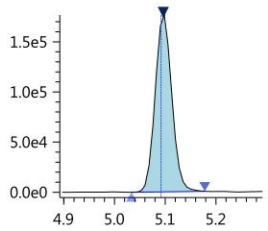
Q 588.80>419.00 (-) 1.77e5



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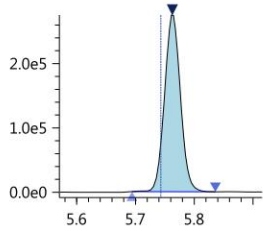
ISTD 530.90>169.15 (-) 2.76e5



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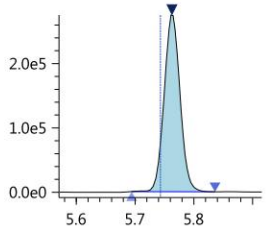
Q 530.90>169.15 (-) 2.76e5



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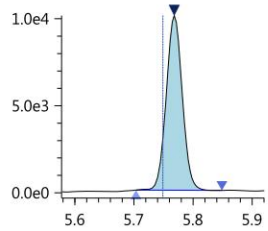

N-EtFOSE-d9_IS
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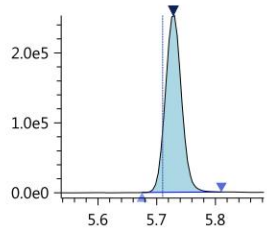
ISTD 638.70>59.10 (-) 2.54e5



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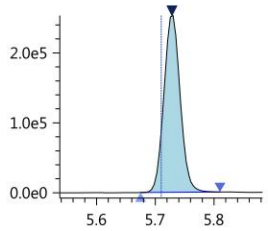

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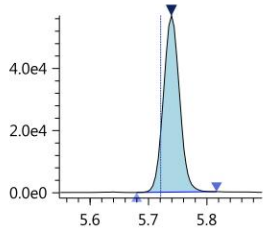
RT 5.739 Area 109200
Q 630.00>58.90 (-) 5.70e4



13C7-PFUnDA_IS
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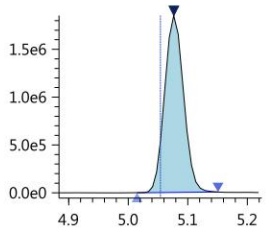
RT 5.077 Area 4118488
ISTD 570.00>525.00 (-) 1.85e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_047
Lab ID: KQ1818586-02
RunType: CCB
Matrix: Soil

Date Acquired: 12/21/18 03:08
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	13C2-6:2 FTS	58	70	130	Native ok
	D5-EtFOSAA	184	70	130	Native ok
	13C2-8:2 FTS	61	70	130	Native ok
	D3-MeFOSAA	174	70	130	Native ok
Surrogates	D3-MeFOSAA	159	20	154	High Bias ND
	D5-EtFOSAA	164	29	153	High Bias ND

Primary Review: _____

Printed: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_047	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:08	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818586-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**		**Report Group:**	KQ1818586
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.066	+0.01	5433484	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.974	+0.01	1171886	5.1135	102		33 - 109	Y
18O2-PFHxS	4.360	+0.00	579964	4.2261	85		36 - 120	Y
13C4-PFOS	4.686	+0.00	611447	4.3773	88		32 - 130	Y
13C4-PFBA	3.320	+0.01	3528997	5.2190	104		34 - 116	Y
13C5-PFPeA	3.918	+0.00	1804116	5.3247	106		39 - 133	Y
13C2-PFHxA	4.183	+0.00	6348151	5.3303	107		32 - 136	Y
13C4-PFHpA	4.362	+0.00	3755228	4.3247	86		36 - 133	Y
13C4-PFOA	4.532	+0.01	6511613	4.7166	94		31 - 134	Y
13C5-PFNA	4.699	+0.00	4273693	4.7469	95		27 - 133	Y
13C2-PFDA	4.884	+0.01	3935788	4.7624	95		30 - 137	Y
13C2-PFUnDA	5.066	+0.01	4768851	5.0463	101		32 - 146	Y
13C2-PFDoDA	5.245	+0.01	6868389	5.0507	101		36 - 136	Y
13C2-PFTeDA	5.568	+0.01	5579722	5.5663	111		39 - 138	Y
13C8-FOSA	5.221	+0.01	1814060	5.5080	110		40 - 132	Y
D3-MeFOSAA	4.988	+0.01	894739	7.9299	159	*	20 - 154	Y
D5-EtFOSAA	5.085	+0.01	959045	8.1840	164	*	29 - 153	Y
13C2-6:2 FTS	4.522	+0.00	443169	2.5286	51		30 - 140	Y
13C2-8:2 FTS	4.882	+0.00	299448	2.5334	51		9 - 171	Y

Target Compounds

Final Conc.Units: ng/g

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.980	+0.01	172	0.0008	0.0064	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.354	0.00	1184	0.0098	0.078	U	Y

1st CM 01/14/19

2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_047	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 03:08	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1818586-02	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/g

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)	0		0	0	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.918	+0.00	84329	0.0016	0.013	U	Y
Perfluorohexanoic acid (PFHxA)	4.183	+0.01	8504	0.0067	0.054	U	Y
Perfluoroheptanoic acid (PFHpA)	4.352	-0.01	3544	0.0051	0.041	U	Y
Perfluorooctanoic acid (PFOA)	4.531	+0.00	8738	0.0089	0.071	U	Y
Perfluorononanoic acid (PFNA)	4.701	+0.01	984	-0.0032	0	U	Y
Perfluorodecanoic acid (PFDA)	4.884	+0.01	2439	0.0037	0.030	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.066	+0.01	10885	0.0115	0.092	U	Y
Perfluorododecanoic acid (PFDoDA)	5.240	+0.00	2055	0.0095	0.076	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.417	+0.01	1093	0.0008	0.0064	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.567	+0.00	42326	0.0151	0.12	U	Y
Perfluorooctane sulfonamide (FOSA)	5.220	+0.01	864	0.0015	0.012	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.985	0.00	946	0.0100	0.080	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0		0	0	0	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.884	+0.01	63	0.0012	0.0096	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

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Insight Report

Printed at 1/14/2019 12:39:49 PM

122018_047

Sample ID: IB
Date acquired: 12/21/2018 3:08:48 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_047.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.320	3528997	3528997	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.320	3528997	5433484	26	5.2190	ng/mL	----
PFBA	ND(W/B)	----	----	3528997	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.918	1804116	1804116	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.918	1804116	5433484	26	5.3247	ng/mL	----
PFPeA	Auto	3.918	84329	1804116	4	0.0016	ng/mL	----
PFBS_1	Auto	3.980	172	1171886	16	0.0008	ng/mL	----
PFBS-13C	Auto	3.974	1171886	5433484	26	5.1135	ng/mL	----
PFBS-13C_IS	Auto	3.974	1171886	1171886	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.183	6348151	6348151	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.183	6348151	5433484	26	5.3303	ng/mL	----
PFHxA	M	4.183	8504	6348151	6	0.0067	ng/mL	----
PFHpA	Auto	4.352	3544	3755228	8	0.0051	ng/mL	----
PFHpA-13C_IS	Auto	4.362	3755228	3755228	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.362	3755228	5433484	26	4.3247	ng/mL	----
PFHxS-18O_IS	Auto	4.360	579964	579964	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.360	579964	5433484	26	4.2261	ng/mL	----
PFHxS_1	Auto	4.354	1184	579964	7	0.0098	ng/mL	----
6_2-FTS-13C	Auto	4.522	443169	5433484	26	2.5286	ng/mL	----
6_2-FTS-13C_IS	Auto	4.522	443169	443169	10	5.0000	ng/mL	----
6_2-FTS_1	ND(W/B)	----	----	443169	10	----	ng/mL	----
PFHpS_1	ND(W/B)	----	----	579964	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.532	6511613	6511613	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.532	6511613	5433484	26	4.7166	ng/mL	----
PFOA	M	4.531	8738	6511613	9	0.0089	ng/mL	----
PFOS_1	ND(W/B)	----	----	611447	13	----	ng/mL	----
PFOS-13C_IS	Auto	4.686	611447	611447	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.686	611447	5433484	26	4.3773	ng/mL	----
PFNA-13C_IS	Auto	4.699	4273693	4273693	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.699	4273693	5433484	26	4.7469	ng/mL	----
PFNA	Auto	4.701	984	4273693	11	-0.0032	ng/mL	----
PFDA-13C_IS	Auto	4.884	3935788	3935788	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.884	3935788	5433484	26	4.7624	ng/mL	----
PFDA	M	4.884	2439	3935788	12	0.0037	ng/mL	----
8_2-FTS-13C_IS	Auto	4.882	299448	299448	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.882	299448	5433484	26	2.5334	ng/mL	----
8_2-FTS_1	M	4.884	63	299448	15	0.0012	ng/mL	----
PFDS_1	ND(W/B)	----	----	611447	13	----	ng/mL	----
PFUnA	Auto	5.066	10885	4768851	14	0.0115	ng/mL	----
PFUnA-13C_IS	Auto	5.066	4768851	4768851	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.066	4768851	5433484	26	5.0463	ng/mL	----
PFDoA	Auto	5.240	2055	6868389	17	0.0095	ng/mL	----
PFDoA-13C	Auto	5.245	6868389	5433484	26	5.0507	ng/mL	----
PFDoA-13C_IS	Auto	5.245	6868389	6868389	17	5.0000	ng/mL	----
PFTrDA	Auto	5.417	1093	5579722	22	0.0008	ng/mL	----
PFTeDA	Auto	5.567	42326	5579722	22	0.0151	ng/mL	----
PFTeDA-13C	Auto	5.568	5579722	5433484	26	5.5663	ng/mL	----
PFTeDA-13C_IS	Auto	5.568	5579722	5579722	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.221	1814060	1814060	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.221	1814060	5433484	26	5.5080	ng/mL	----
FOSA	M	5.220	864	1814060	18	0.0015	ng/mL	----
N-MeFOSAA	Auto	4.985	946	894739	19	0.0100	ng/mL	----
N-MeFOSAA-d3	Auto	4.988	894739	5433484	26	7.9299	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.988	894739	894739	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	959045	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.085	959045	959045	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.085	959045	5433484	26	8.1840	ng/mL	----
13C7-PFUnDA_IS	Auto	5.066	5433484	5433484	26	5.0000	ng/mL	----

Insight Report

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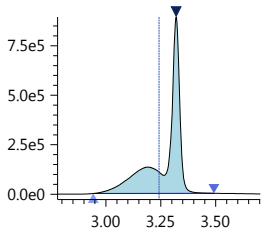
PFBA-13C_IS
Conc 5.0000
RT 3.320 Area 3528997
ISTD 216.90>172.15 (-) 8.95e5



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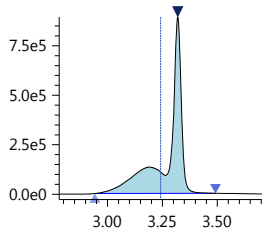
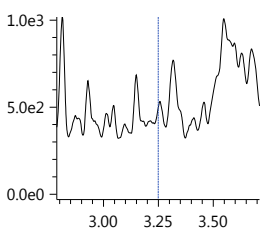
Conc 5.2190
RT 3.320 Area 3528997
Q 216.90>172.15 (-) 8.95e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.02e3



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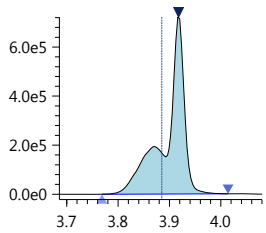
Conc 5.0000
RT 3.918 Area 1804116
ISTD 267.90>223.00 (-) 7.23e5



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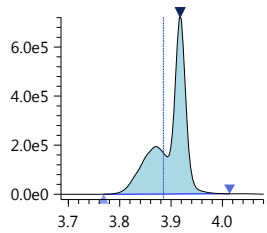
Conc 5.3247
RT 3.918 Area 1804116
Q 267.90>223.00 (-) 7.23e5



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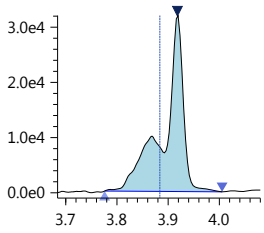
Q 263.05>219.10 (-) 3.21e4



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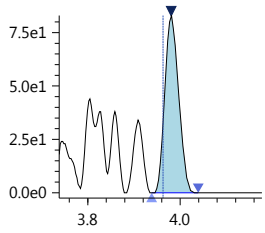
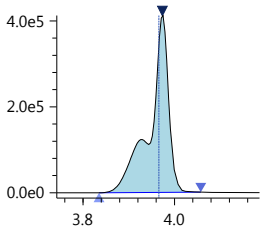
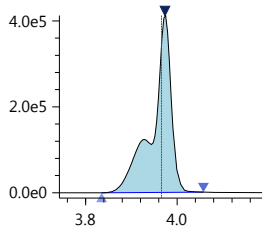
Conc 0.0008
RT 3.980 Area 172
Q 299.00>80.00 (-) 8.30e1



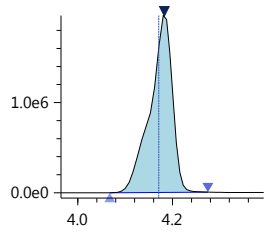
PFBS-13C
Conc 5.1135
RT 3.974 Area 1171886
Q 301.80>80.00 (-) 4.13e5



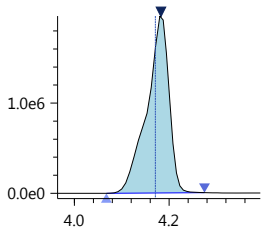
PFBS-13C_IS
Conc 5.0000
RT 3.974 Area 1171886
ISTD 301.80>80.00 (-) 4.13e5



PFHxA-13C_IS
Conc 5.0000
RT 4.183 Area 6348151
ISTD 314.90>270.10 (-) 1.97e6



PFHxA-13C
Conc 5.3303
RT 4.183 Area 6348151
Q 314.90>270.10 (-) 1.97e6



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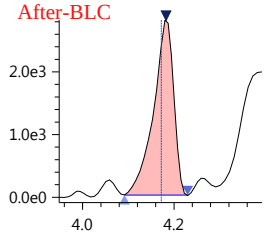
Conc 0.0067
RT 4.183 Area 8504
Q 313.00>269.00 (-) 2.83e3



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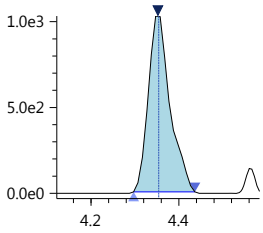
Conc 0.0051
RT 4.352 Area 3544
Q 362.90>319.00 (-) 1.03e3



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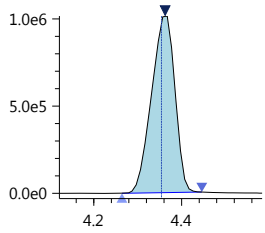
Conc 5.0000
RT 4.362 Area 3755228
ISTD 366.90>322.10 (-) 1.02e6



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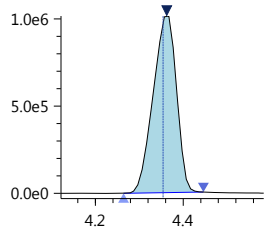
Conc 4.3247
RT 4.362 Area 3755228
Q 366.90>322.10 (-) 1.02e6



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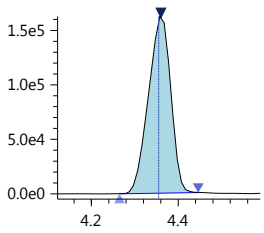
ISTD 402.70>84.05 (-) 1.63e5



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Conc 4.2261
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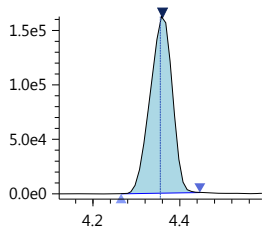
Q 402.70>84.05 (-) 1.63e5



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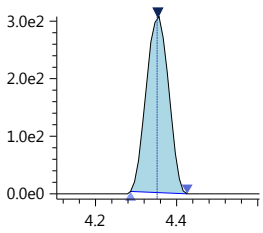
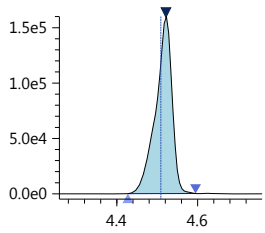
RT 4.354 Area 1184
Q 399.00>80.00 (-) 3.08e2



6_2-FTS-13C
Conc 2.5286
RT 4.522 Area 443169
Q 428.90>409.00 (-) 1.60e5



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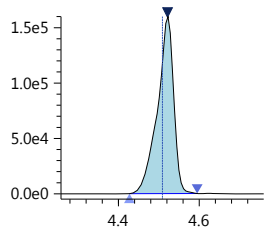

Insight Report

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6_2-FTS_1
Conc ----
RT ---- Area ----
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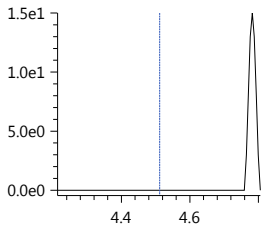

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Conc ----
RT ---- Area ----
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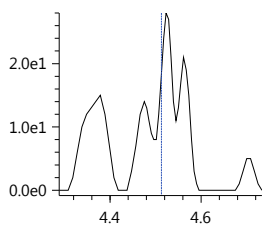
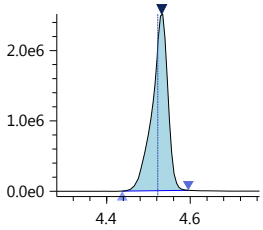


PFOA-13C_IS
Conc 5.0000
RT 4.532 Area 6511613
ISTD 416.80>372.05 (-) 2.52e6



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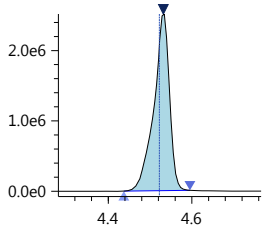
Conc 4.7166
RT 4.532 Area 6511613
Q 416.80>372.05 (-) 2.52e6



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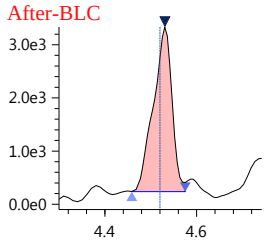
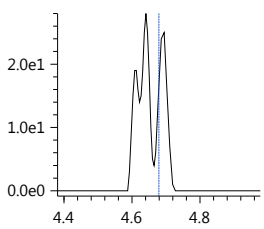
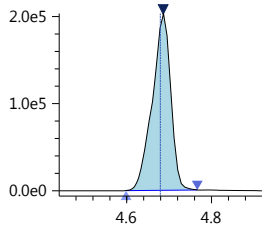
Q 413.00>369.00 (-) 3.33e3



PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 2.80e1



PFOS-13C_IS
Conc 5.0000
RT 4.686 Area 611447
ISTD 502.80>80.05 (-) 2.03e5



PFOS-13C
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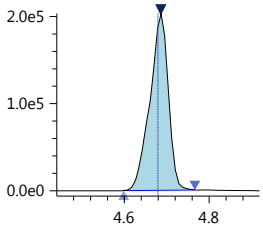
RT 4.686 Area 611447
Q 502.80>80.05 (-) 2.03e5



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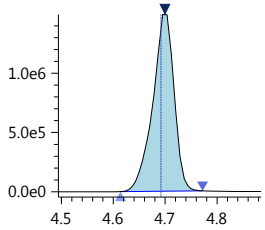
RT 4.699 Area 4273693
ISTD 467.80>423.00 (-) 1.50e6



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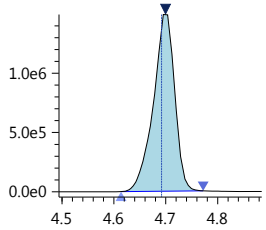
RT 4.699 Area 4273693
Q 467.80>423.00 (-) 1.50e6



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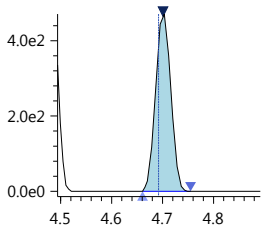
RT 4.701 Area 984
Q 463.00>418.90 (-) 4.71e2



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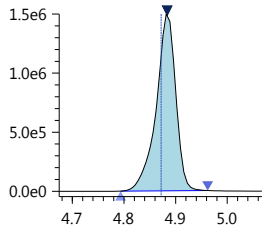
ISTD 514.80>469.95 (-) 1.50e6



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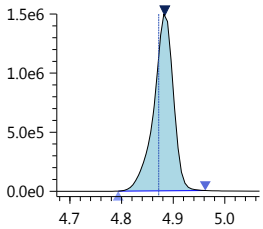

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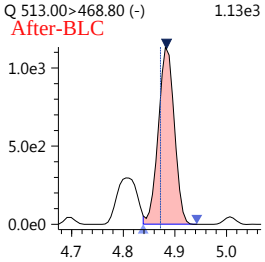
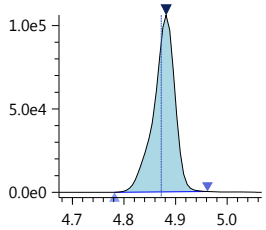


8_2-FTS-13C_IS
Conc 5.0000
RT 4.882 Area 299448
ISTD 528.80>509.00 (-) 1.06e5



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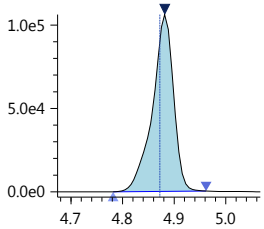
RT 4.882 Area 299448
Q 528.80>509.00 (-) 1.06e5



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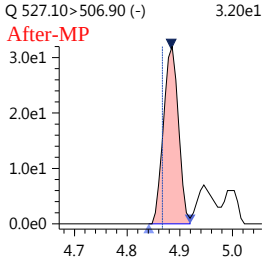
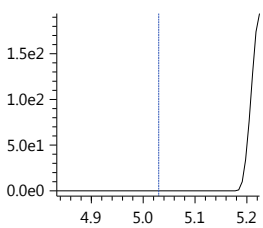
Conc 0.0012
RT 4.884 Area 63
Q 527.10>506.90 (-) 3.20e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.94e2



PFUnA
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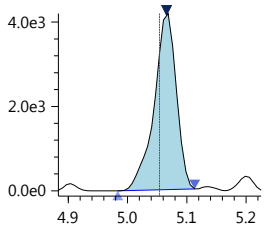
RT 5.066 Area 10885
Q 563.00>518.90 (-) 4.20e3



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RT 5.066 Area 4768851
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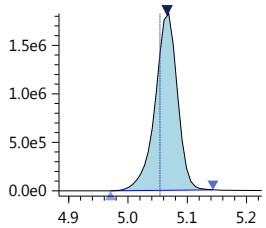

Insight Report

Printed at 1/14/2019 12:39:49 PM

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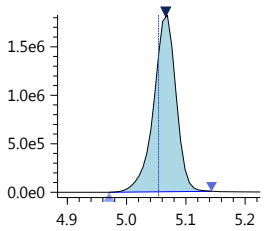
Q 564.80>519.95 (-) 1.83e6



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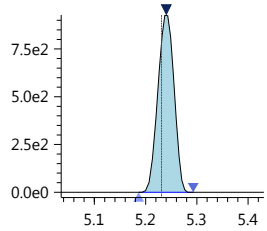

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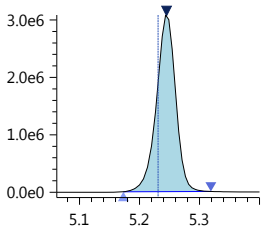
Q 614.80>569.95 (-) 3.09e6



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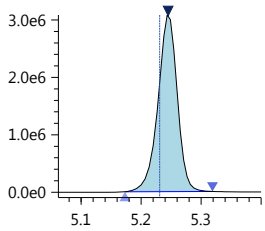
ISTD 614.80>569.95 (-) 3.09e6



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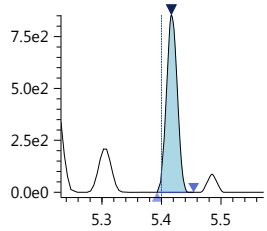

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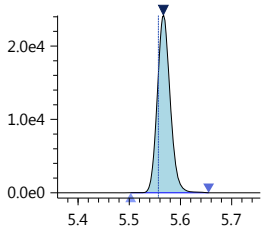
Q 713.40>669.00 (-) 2.42e4



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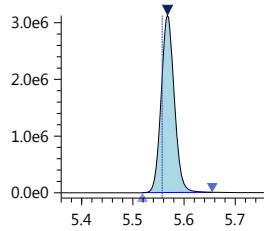

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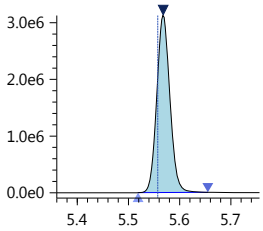

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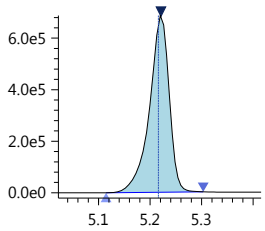

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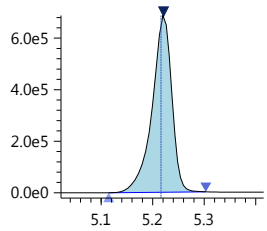
Q 506.00>78.05 (-) 6.88e5



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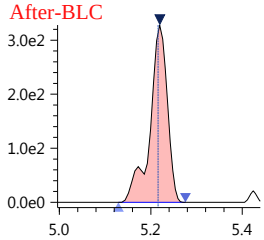

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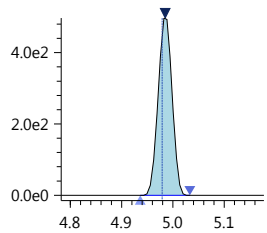
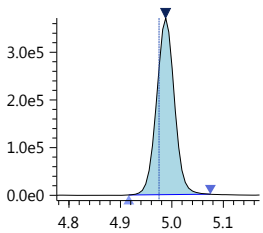


N-MeFOSAA-d3
Conc 7.9299
RT 4.988 Area 894739
Q 572.80>419.05 (-) 3.72e5



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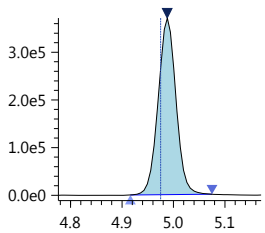
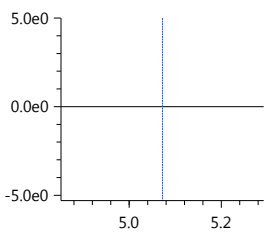
RT 4.988 Area 894739
ISTD 572.80>419.05 (-) 3.72e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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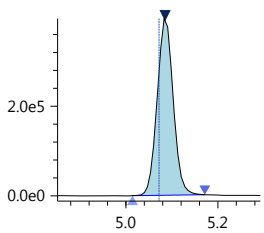
RT 5.085 Area 959045
ISTD 588.80>419.00 (-) 3.96e5



N-EtFOSAA-d5
Conc 8.1840
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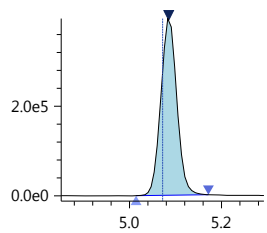
Q 588.80>419.00 (-) 3.96e5



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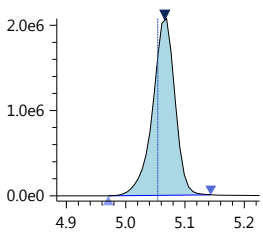
RT 5.066 Area 5433484
ISTD 570.00>525.00 (-) 2.08e6



Insight Report

Printed at 1/14/2019 11:23:27 AM

122018_047

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Acquired by: System Administrator
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PFBA-13C_IS
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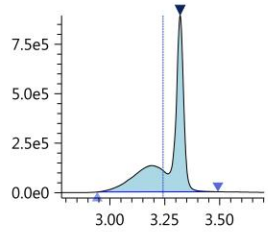
ISTD 216.90>172.15 (-) 8.95e5



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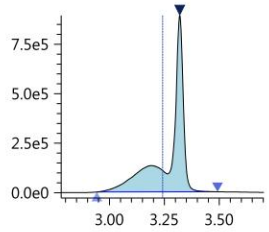

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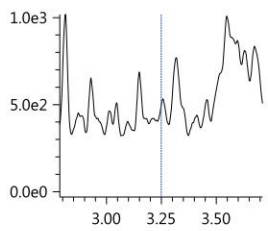
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.02e3



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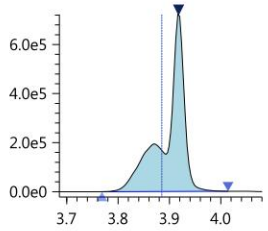
ISTD 267.90>223.00 (-) 7.23e5



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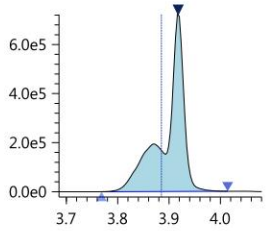

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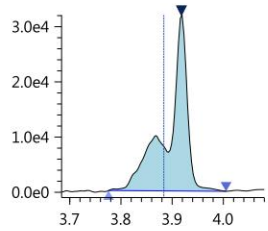
Q 263.05>219.10 (-) 3.21e4



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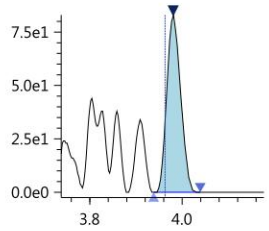

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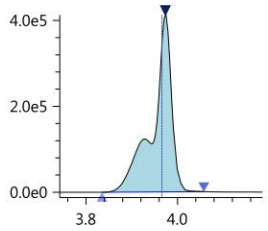
Q 301.80>80.00 (-) 4.13e5



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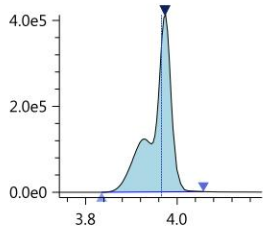

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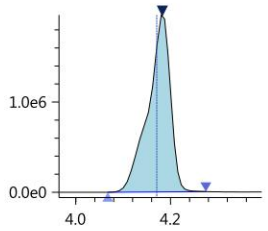

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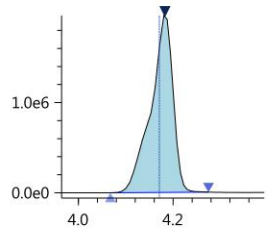
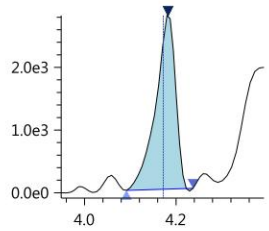


PFHxA
Conc 0.0066
RT 4.183 Area 8344
Q 313.00>269.00 (-) 2.83e3



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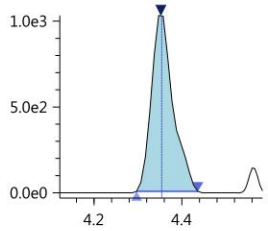
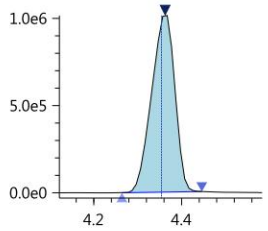
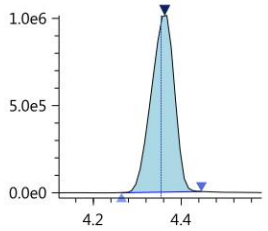
Conc 0.0051
RT 4.352 Area 3544
Q 362.90>319.00 (-) 1.03e3



PFHpA-13C_IS
Conc 5.0000
RT 4.362 Area 3755228
ISTD 366.90>322.10 (-) 1.02e6



PFHpA-13C
Conc 4.3247
RT 4.362 Area 3755228
Q 366.90>322.10 (-) 1.02e6



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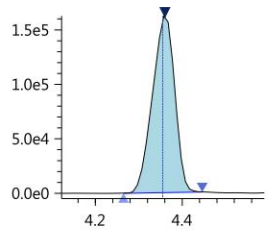
Conc 5.0000
RT 4.360 Area 579964
ISTD 402.70>84.05 (-) 1.63e5



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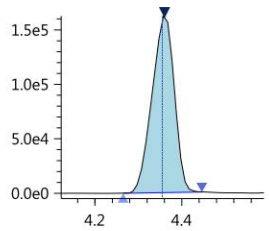
Conc 4.2261
RT 4.360 Area 579964
Q 402.70>84.05 (-) 1.63e5



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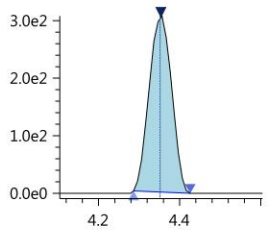
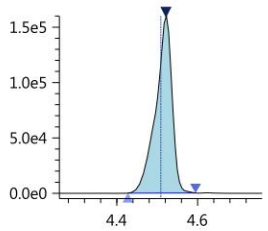
Conc 0.0098
RT 4.354 Area 1184
Q 399.00>80.00 (-) 3.08e2



6_2-FTS-13C
Conc 2.5286
RT 4.522 Area 443169
Q 428.90>409.00 (-) 1.60e5



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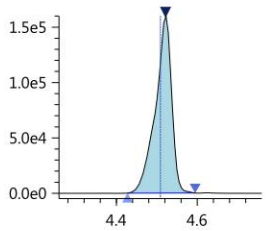
RT 4.522 Area 443169
ISTD 428.90>409.00 (-) 1.60e5



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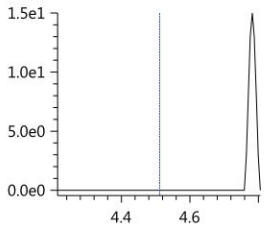
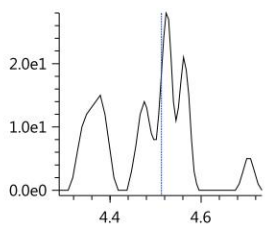
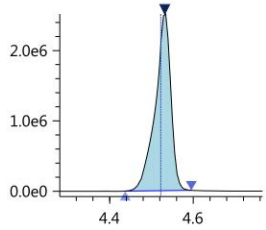
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 1.50e1



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 2.80e1



PFOA-13C_IS
Conc 5.0000
RT 4.532 Area 6511613
ISTD 416.80>372.05 (-) 2.52e6



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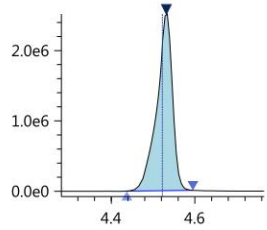
Conc 4.7166
RT 4.532 Area 6511613
Q 416.80>372.05 (-) 2.52e6



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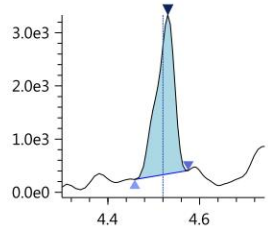
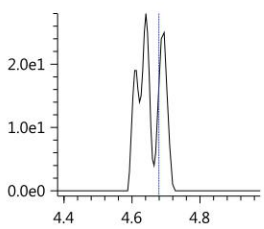
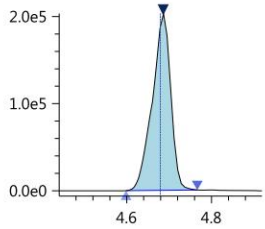
Conc 0.0083
RT 4.531 Area 8127
Q 413.00>369.00 (-) 3.33e3



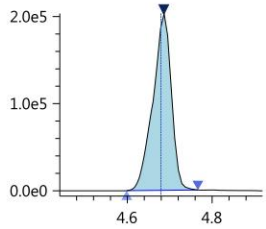
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 2.80e1



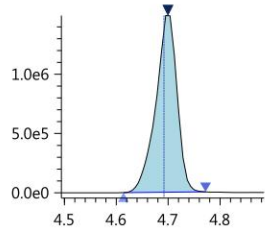
PFOS-13C_IS
Conc 5.0000
RT 4.686 Area 611447
ISTD 502.80>80.05 (-) 2.03e5



PFOS-13C
Conc 4.3773
RT 4.686 Area 611447
Q 502.80>80.05 (-) 2.03e5



PFNA-13C_IS
Conc 5.0000
RT 4.699 Area 4273693
ISTD 467.80>423.00 (-) 1.50e6



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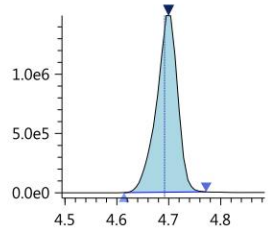
RT 4.699 Area 4273693
Q 467.80>423.00 (-) 1.50e6



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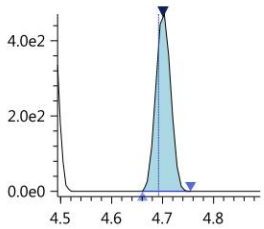
Conc -0.0032
RT 4.701 Area 984
Q 463.00>418.90 (-) 4.71e2



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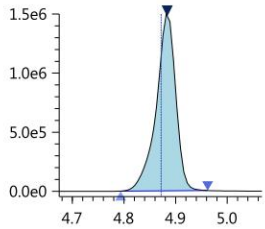
ISTD 514.80>469.95 (-) 1.50e6



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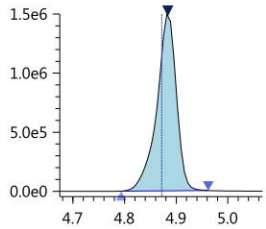
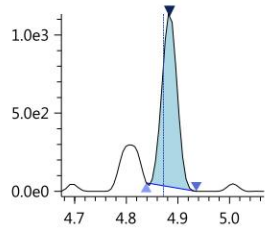
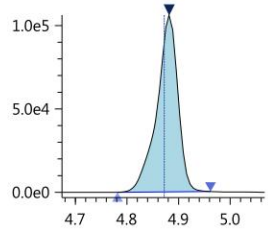
Q 514.80>469.95 (-) 1.50e6



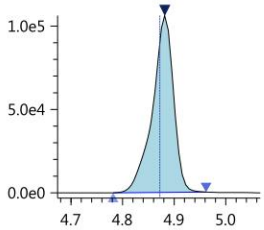
PFDA
Conc 0.0035
RT 4.884 Area 2288
Q 513.00>468.80 (-) 1.13e3



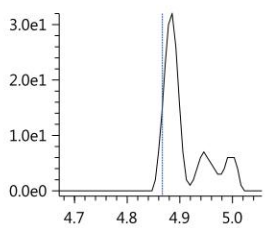
8_2-FTS-13C_IS
Conc 5.0000
RT 4.882 Area 299448
ISTD 528.80>509.00 (-) 1.06e5



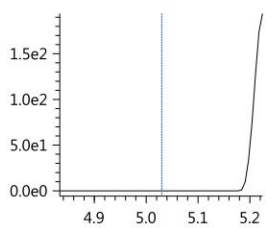
8_2-FTS-13C
Conc 2.5334
RT 4.882 Area 299448
Q 528.80>509.00 (-) 1.06e5



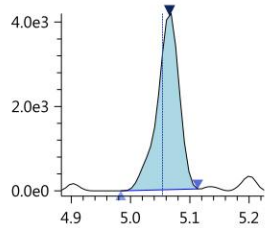
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 3.20e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.94e2



PFUnA
Conc 0.0115
RT 5.066 Area 10885
Q 563.00>518.90 (-) 4.20e3



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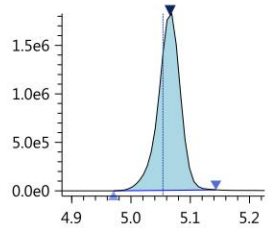
Conc 5.0000
RT 5.066 Area 4768851
ISTD 564.80>519.95 (-) 1.83e6



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PFUnA-13C
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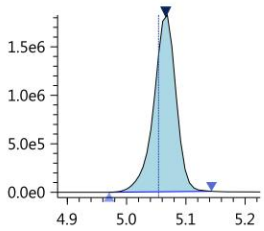
RT 5.066 Area 4768851
Q 564.80>519.95 (-) 1.83e6



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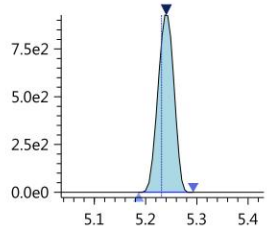
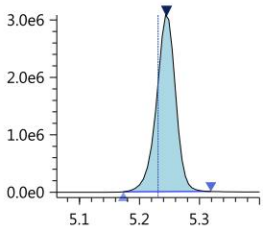
Conc 0.0095
RT 5.240 Area 2055
Q 613.05>569.00 (-) 9.28e2



PFDoA-13C
Conc 5.0507
RT 5.245 Area 6868389
Q 614.80>569.95 (-) 3.09e6



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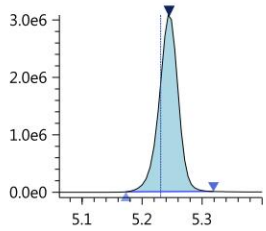
ISTD 614.80>569.95 (-) 3.09e6



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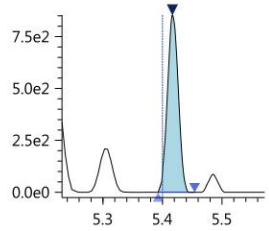
Conc 0.0008
RT 5.417 Area 1093
Q 663.00>618.90 (-) 8.54e2



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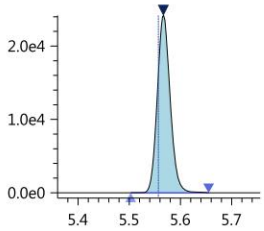
RT 5.567 Area 42326
Q 713.40>669.00 (-) 2.42e4



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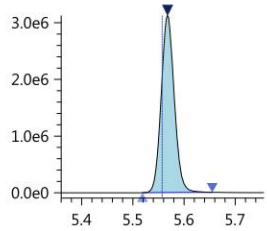
Conc 5.5663
RT 5.568 Area 5579722
Q 714.70>669.90 (-) 3.13e6



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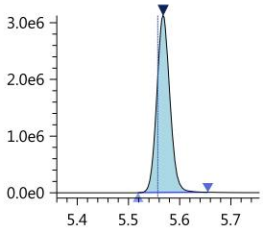
ISTD 714.70>669.90 (-) 3.13e6



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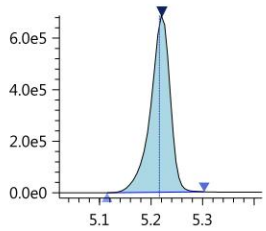
Conc 5.0000
RT 5.221 Area 1814060
ISTD 506.00>78.05 (-) 6.88e5



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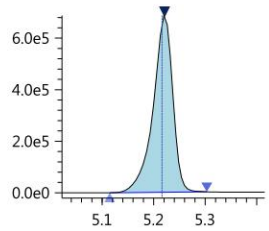
Q 506.00>78.05 (-) 6.88e5



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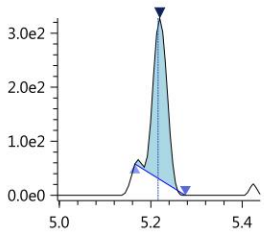
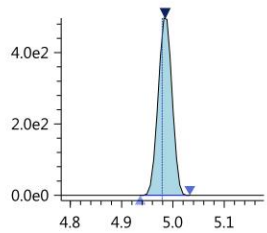
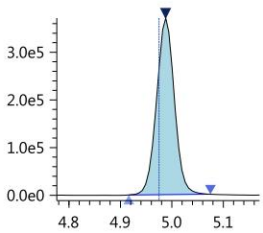
Conc 0.0011
RT 5.220 Area 635
Q 498.20>78.00 (-) 3.28e2



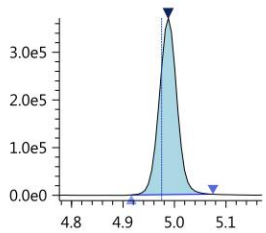
N-MeFOSAA
Conc 0.0100
RT 4.985 Area 946
Q 570.20>419.00 (-) 4.97e2



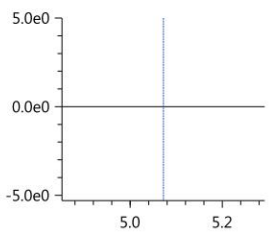
N-MeFOSAA-d3
Conc 7.9299
RT 4.988 Area 894739
Q 572.80>419.05 (-) 3.72e5



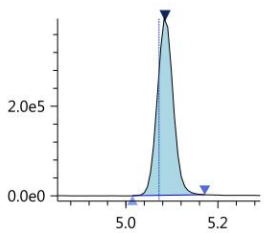
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.988 Area 894739
ISTD 572.80>419.05 (-) 3.72e5



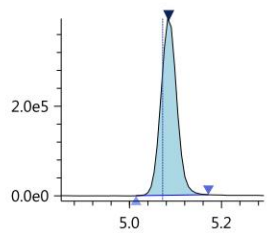
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



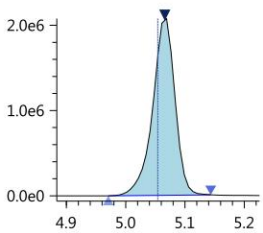
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.085 Area 959045
ISTD 588.80>419.00 (-) 3.96e5



N-EtFOSAA-d5
Conc 8.1840
RT 5.085 Area 959045
Q 588.80>419.00 (-) 3.96e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.066 Area 5433484
ISTD 570.00>525.00 (-) 2.08e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_120
Lab ID: KQ1900180-02
RunType: CCB
Matrix: Water

Date Acquired: 1/5/19 11:13
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

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: _____

Printed: 1/18/19 10:55
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_120	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:13	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1900180-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/13/18	**Receive Date:**	12/13/18

Analysis Lot:	621097	**Prep Lot:**		**Report Group:**	KQ1900180
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	20001

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.074	+0.00	4346703	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.980	+0.00	800093	4.5995	92	20 - 109	Y
18O2-PFHxS	4.369	+0.00	681264	5.6768	114	26 - 122	Y
13C4-PFOS	4.693	+0.00	580127	4.6317	93	25 - 121	Y
13C4-PFBA	3.323		2563878	4.5968	92	27 - 124	Y
13C5-PFPeA	3.923	+0.00	1472177	4.7365	95	27 - 138	Y
13C2-PFHxA	4.189	+0.00	5142954	4.9552	99	28 - 132	Y
13C4-PFHpA	4.369		3608201	4.6343	93	19 - 139	Y
13C4-PFOA	4.539	+0.00	4411685	4.2509	85	22 - 130	Y
13C5-PFNA	4.707	+0.00	4157227	4.8142	96	20 - 127	Y
13C2-PFDA	4.892	+0.00	3887083	5.1563	103	24 - 125	Y
13C2-PFUnDA	5.074	+0.00	3402736	4.8242	96	22 - 125	Y
13C2-PFDoDA	5.254	+0.00	4814175	4.7039	94	19 - 122	Y
13C2-PFTeDA	5.577	+0.00	3785537	5.1693	103	13 - 124	Y
13C8-FOSA	5.228		1617308	4.8529	97	18 - 109	Y
D3-MeFOSA	5.620	+0.00	502200	5.2955	106	15 - 153	Y
D5-EtFOSA	5.758		848561	5.3363	107	25 - 107	Y
D7-MeFOSE	5.592	+0.00	683476	4.9613	99	24 - 112	Y
D9-EtFOSE	5.724	+0.00	767492	5.1621	103	19 - 109	Y
D3-MeFOSAA	4.997	+0.00	661068	5.0119	100	9 - 123	Y
D5-EtFOSAA	5.093		658016	5.1964	104	12 - 126	Y
13C2-6:2 FTS	4.529	+0.00	374410	3.4677	69	10 - 226	Y
13C2-8:2 FTS	4.890	+0.00	350770	4.1774	84	10 - 202	Y

1st CM 01/18/19

2nd 01/21/19

Data File:	J:\LCMS06\Data\190104_b5\010419_120	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:13	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1900180-02	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.918	-0.06	151	0.0009	0.029	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.373	+0.01	2283	0.0174	0.56	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.529		61	0.0004	0.013	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.689	0.00	184	0.0022	0.070	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.924	+0.00	69605	0.0140	0.45	U	Y
Perfluorohexanoic acid (PFHxA)	4.191	+0.00	15125	0.0146	0.47	U	Y
Perfluoroheptanoic acid (PFHpA)	4.369	+0.00	2587	0.0026	0.083	U	Y
Perfluorooctanoic acid (PFOA)	4.538	+0.00	10622	0.0140	0.45	J	Y
Perfluorononanoic acid (PFNA)	4.708	+0.00	520	0.0040	0.13	U	Y
Perfluorodecanoic acid (PFDA)	4.888	0.00	2671	0.0041	0.13	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.069	0.00	7364	0.0131	0.42	U	Y
Perfluorododecanoic acid (PFDoDA)	5.257	+0.01	1501	0.0125	0.40	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.424		2249	0.0013	0.042	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.578	+0.00	26928	0.0046	0.15	U	Y
Perfluorooctane sulfonamide (FOSA)	5.221	-0.01	554	0.0013	0.042	U	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.625	+0.00	847	0.0064	0.20	U	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	0		0	0	0	U	Y
N-Methyl perfluorooctane sulfonamidoethanol	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoethanol	0		0	0	0	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.987	-0.01	851	0.0123	0.39	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.525	0.00	172	0.0025	0.080	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.889	+0.00	32	0.0005	0.016	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

Insight Report

Printed at 1/18/2019 10:42:01 AM

010419_120

Sample ID: IB
Date acquired: 1/5/2019 11:13:58 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_120.lcd
Vial: 13 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.323	2563878	2563878	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.323	2563878	4346703	26	4.5968	ng/mL	----
PFBA	ND(W/B)	----	----	2563878	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.923	1472177	1472177	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.923	1472177	4346703	26	4.7365	ng/mL	----
PFPeA	Auto	3.924	69605	1472177	4	0.0140	ng/mL	----
PFBS_1	Auto	3.918	151	800093	16	0.0009	ng/mL	----
PFBS-13C	Auto	3.980	800093	4346703	26	4.5995	ng/mL	----
PFBS-13C_IS	Auto	3.980	800093	800093	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.189	5142954	5142954	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.189	5142954	4346703	26	4.9552	ng/mL	----
PFHxA	M	4.191	15125	5142954	6	0.0146	ng/mL	----
PFHpA	Auto	4.369	2587	3608201	8	0.0026	ng/mL	----
PFHpA-13C_IS	Auto	4.369	3608201	3608201	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.369	3608201	4346703	26	4.6343	ng/mL	----
PFHxS-18O_IS	Auto	4.369	681264	681264	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.369	681264	4346703	26	5.6768	ng/mL	----
PFHxS_1	Auto	4.373	2283	681264	7	0.0174	ng/mL	----
6_2-FTS-13C	Auto	4.529	374410	4346703	26	3.4677	ng/mL	----
6_2-FTS-13C_IS	Auto	4.529	374410	374410	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.525	172	374410	10	0.0025	ng/mL	----
PFHpS_1	M	4.529	61	681264	7	0.0004	ng/mL	----
PFOA-13C_IS	Auto	4.539	4411685	4411685	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.539	4411685	4346703	26	4.2509	ng/mL	----
PFOA	M	4.538	10622	4411685	9	0.0140	ng/mL	----
PFOS_1	Auto	4.689	184	580127	13	0.0022	ng/mL	----
PFOS-13C_IS	Auto	4.693	580127	580127	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.693	580127	4346703	26	4.6317	ng/mL	----
PFNA-13C_IS	Auto	4.707	4157227	4157227	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.707	4157227	4346703	26	4.8142	ng/mL	----
PFNA	Auto	4.708	520	4157227	11	0.0040	ng/mL	----
PFDA-13C_IS	Auto	4.892	3887083	3887083	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.892	3887083	4346703	26	5.1563	ng/mL	----
PFDA	M	4.888	2671	3887083	12	0.0041	ng/mL	----
8_2-FTS-13C_IS	Auto	4.890	350770	350770	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.890	350770	4346703	26	4.1774	ng/mL	----
8_2-FTS_1	M	4.889	32	350770	15	0.0005	ng/mL	----
PFDS_1	ND(W/B)	----	----	580127	13	----	ng/mL	----
PFUnA	Auto	5.069	7364	3402736	14	0.0131	ng/mL	----
PFUnA-13C_IS	Auto	5.074	3402736	3402736	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.074	3402736	4346703	26	4.8242	ng/mL	----
PFDoA	Auto	5.257	1501	4814175	17	0.0125	ng/mL	----
PFDoA-13C	Auto	5.254	4814175	4346703	26	4.7039	ng/mL	----
PFDoA-13C_IS	Auto	5.254	4814175	4814175	17	5.0000	ng/mL	----
PFTrDA	M	5.424	2249	3785537	22	0.0013	ng/mL	----
PFTeDA	Auto	5.578	26928	3785537	22	0.0046	ng/mL	----
PFTeDA-13C	Auto	5.577	3785537	4346703	26	5.1693	ng/mL	----
PFTeDA-13C_IS	Auto	5.577	3785537	3785537	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.228	1617308	1617308	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.228	1617308	4346703	26	4.8529	ng/mL	----
FOSA	Auto	5.221	554	1617308	18	0.0013	ng/mL	----
N-MeFOSAA	Auto	4.987	851	661068	19	0.0123	ng/mL	----
N-MeFOSAA-d3	Auto	4.997	661068	4346703	26	5.0119	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.997	661068	661068	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.620	502200	502200	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.620	502200	4346703	26	5.2955	ng/mL	----
N-MeFOSA	Auto	5.625	847	502200	1	0.0064	ng/mL	----
N-MeFOSE-d7	Auto	5.592	683476	4346703	26	4.9613	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.592	683476	683476	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	683476	20	----	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	658016	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.093	658016	658016	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.093	658016	4346703	26	5.1964	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.758	848561	848561	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.758	848561	4346703	26	5.3363	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	848561	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.724	767492	767492	24	5.0000	ng/mL	----

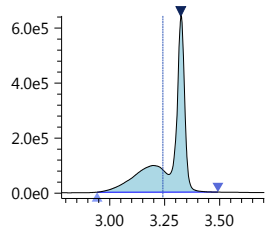
Insight Report

Printed at 1/18/2019 10:42:01 AM

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.724	767492	4346703	26	5.1621	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	767492	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.074	4346703	4346703	26	5.0000	ng/mL	----

PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2563878
ISTD 216.90>172.15 (-) 6.44e5



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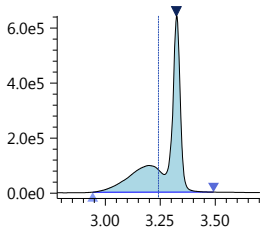
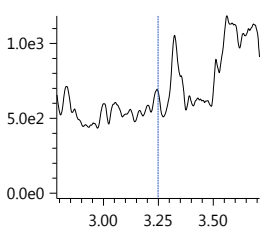
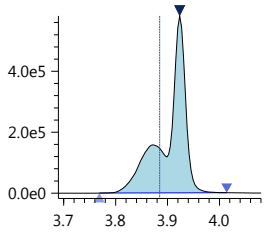
Conc 4.5968
RT 3.323 Area 2563878
Q 216.90>172.15 (-) 6.44e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.18e3



PFPeA-13C_IS
Conc 5.0000
RT 3.923 Area 1472177
ISTD 267.90>223.00 (-) 5.82e5



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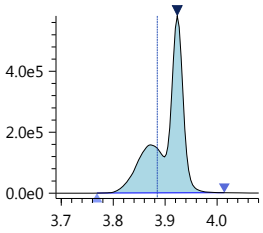

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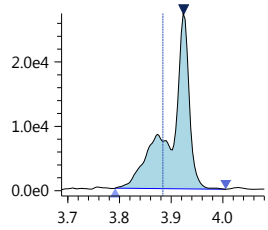
Conc 0.0140
RT 3.924 Area 69605
Q 263.05>219.10 (-) 2.75e4



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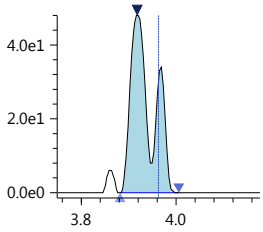
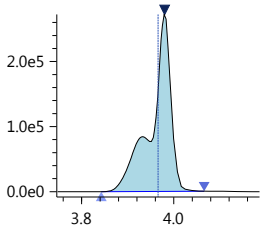
RT 3.918 Area 151
Q 299.00>80.00 (-) 4.80e1



PFBS-13C
Conc 4.5995
RT 3.980 Area 800093
Q 301.80>80.00 (-) 2.72e5



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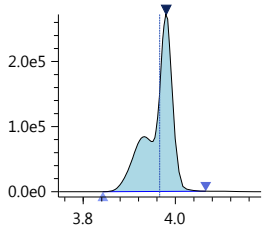

PFHxA-13C_IS
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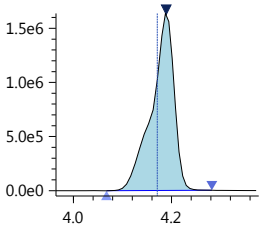
RT 4.189 Area 5142954
ISTD 314.90>270.10 (-) 1.64e6



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Conc 4.9552
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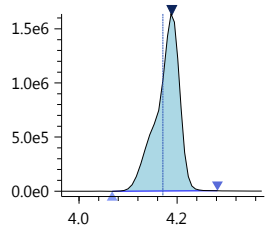
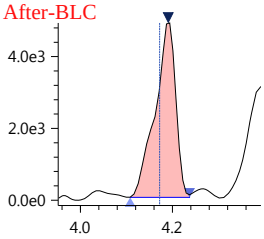
Q 314.90>270.10 (-) 1.64e6

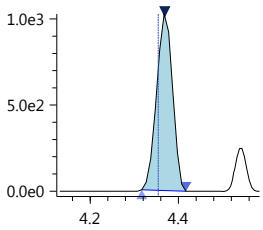


PFHxA
Conc 0.0146
RT 4.191 Area 15125
Q 313.00>269.00 (-) 4.94e3

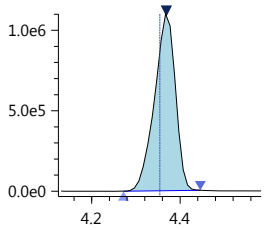
After-BLC



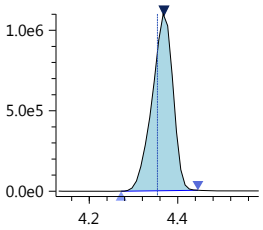
PFHpA
Conc 0.0026
RT 4.369 Area 2587
Q 362.90>319.00 (-) 1.03e3



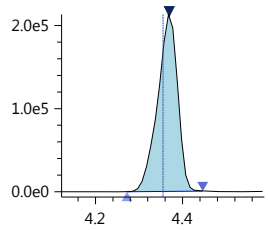
PFHpA-13C_IS
Conc 5.0000
RT 4.369 Area 3608201
ISTD 366.90>322.10 (-) 1.10e6



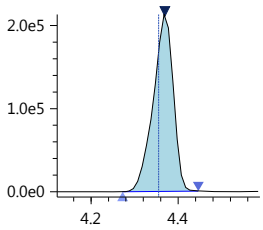
PFHpA-13C
Conc 4.6343
RT 4.369 Area 3608201
Q 366.90>322.10 (-) 1.10e6



PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 681264
ISTD 402.70>84.05 (-) 2.13e5



PFHxS-18O
Conc 5.6768
RT 4.369 Area 681264
Q 402.70>84.05 (-) 2.13e5



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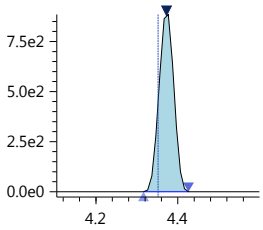
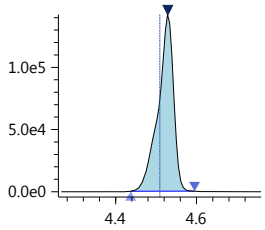
Conc 0.0174
RT 4.373 Area 2283
Q 399.00>80.00 (-) 8.85e2



6_2-FTS-13C
Conc 3.4677
RT 4.529 Area 374410
Q 428.90>409.00 (-) 1.43e5



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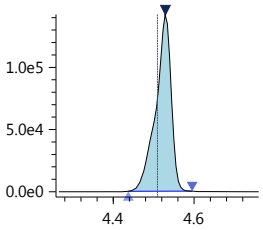
RT 4.529 Area 374410
ISTD 428.90>409.00 (-) 1.43e5



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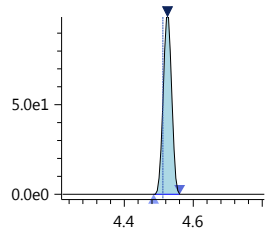
6_2-FTS_1
Conc 0.0025
RT 4.525 Area 172
Q 427.00>407.00 (-) 9.90e1



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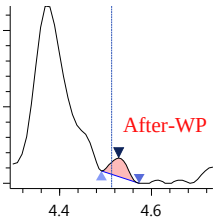
Conc 0.0004
RT 4.529 Area 61
Q 449.00>80.15 (-) 2.32e2



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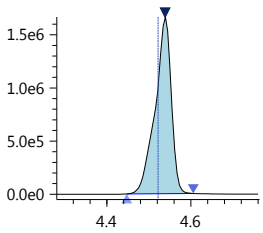
ISTD 416.80>372.05 (-) 1.67e6



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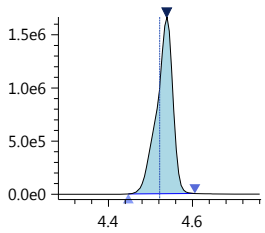
RT 4.539 Area 4411685
Q 416.80>372.05 (-) 1.67e6



PFOA
Conc 0.0140
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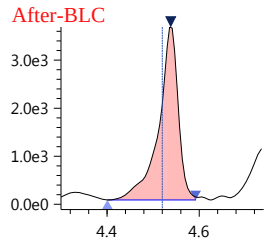
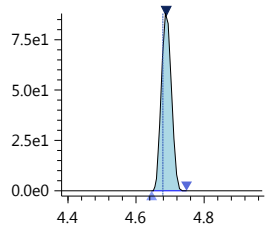
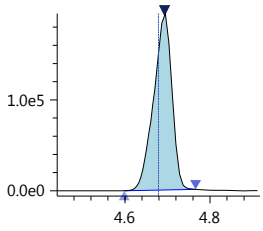
Q 413.00>369.00 (-) 3.69e3



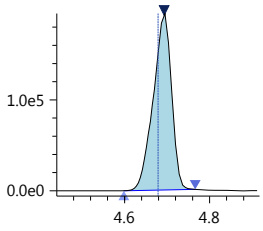
PFOS_1
Conc 0.0022
RT 4.689 Area 184
Q 499.00>80.00 (-) 8.80e1



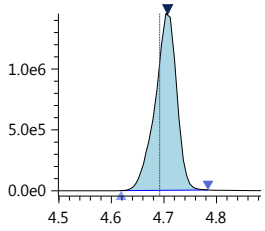
PFOS-13C_IS
Conc 5.0000
RT 4.693 Area 580127
ISTD 502.80>80.05 (-) 1.95e5



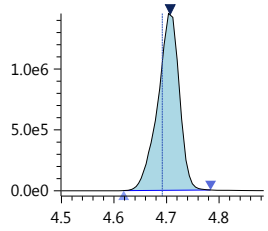
PFOS-13C
Conc 4.6317
RT 4.693 Area 580127
Q 502.80>80.05 (-) 1.95e5



PFNA-13C_IS
Conc 5.0000
RT 4.707 Area 4157227
ISTD 467.80>423.00 (-) 1.46e6



PFNA-13C
Conc 4.8142
RT 4.707 Area 4157227
Q 467.80>423.00 (-) 1.46e6



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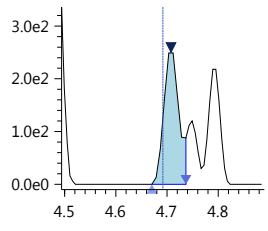
Conc 0.0040
RT 4.708 Area 520
Q 463.00>418.90 (-) 3.36e2



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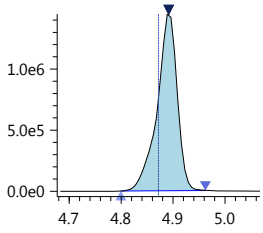
RT 4.892 Area 3887083
ISTD 514.80>469.95 (-) 1.45e6



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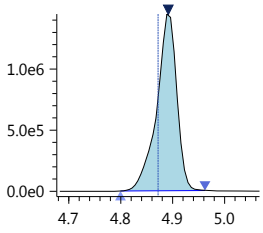
Q 514.80>469.95 (-) 1.45e6



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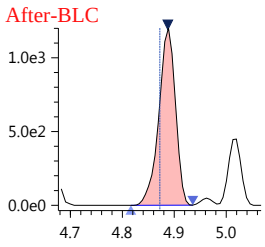
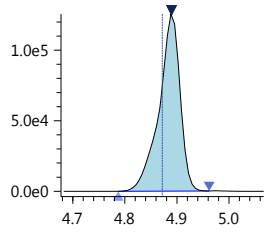
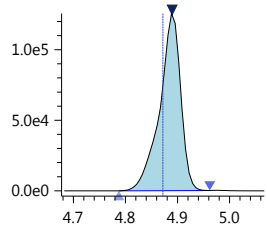
Conc 0.0041
RT 4.888 Area 2671
Q 513.00>468.80 (-) 1.20e3



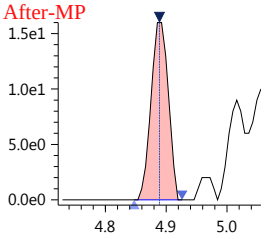
8_2-FTS-13C_IS
Conc 5.0000
RT 4.890 Area 350770
ISTD 528.80>509.00 (-) 1.26e5



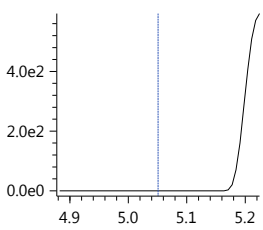
8_2-FTS-13C
Conc 4.1774
RT 4.890 Area 350770
Q 528.80>509.00 (-) 1.26e5



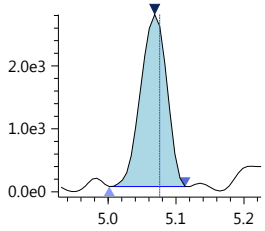
8_2-FTS_1
Conc 0.0005
RT 4.889 Area 32
Q 527.10>506.90 (-) 1.60e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 5.94e2



PFUnA
Conc 0.0131
RT 5.069 Area 7364
Q 563.00>518.90 (-) 2.82e3



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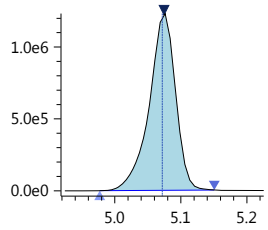
Conc 5.0000
RT 5.074 Area 3402736
ISTD 564.80>519.95 (-) 1.23e6



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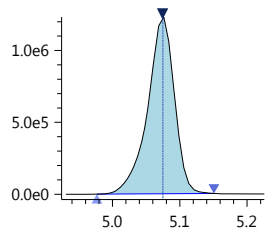
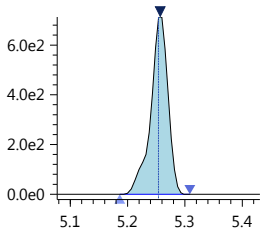
PFUnA-13C
Conc 4.8242
RT 5.074 Area 3402736
Q 564.80>519.95 (-) 1.23e6



PFDoA
Conc 0.0125
RT 5.257 Area 1501
Q 613.05>569.00 (-) 7.13e2



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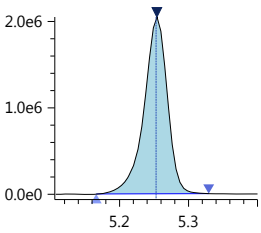
Conc 4.7039
RT 5.254 Area 4814175
Q 614.80>569.95 (-) 2.05e6



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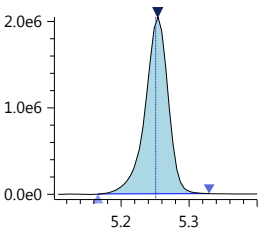
RT 5.254 Area 4814175
ISTD 614.80>569.95 (-) 2.05e6



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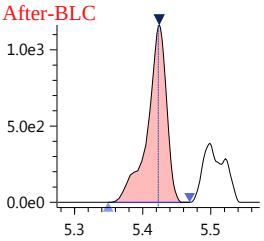
Conc 0.0013
RT 5.424 Area 2249
Q 663.00>618.90 (-) 1.16e3



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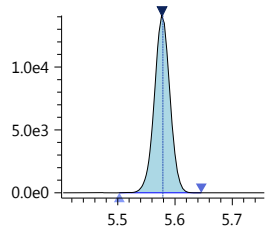
RT 5.578 Area 26928
Q 713.40>669.00 (-) 1.41e4



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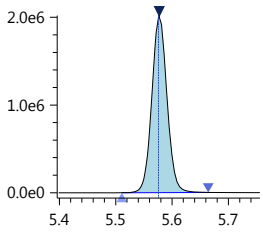
Conc 5.1693
RT 5.577 Area 3785537
Q 714.70>669.90 (-) 2.02e6



PFTeDA-13C_IS
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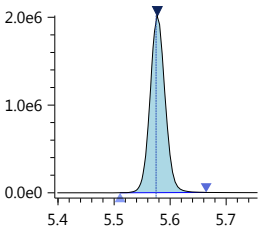
RT 5.577 Area 3785537
ISTD 714.70>669.90 (-) 2.02e6



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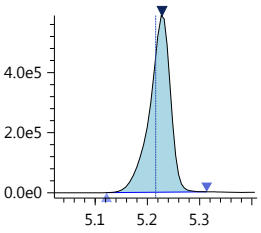
Conc 5.0000
RT 5.228 Area 1617308
ISTD 506.00>78.05 (-) 5.90e5



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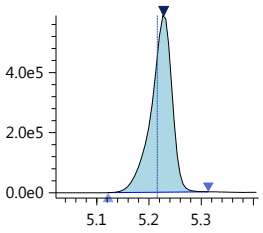
RT 5.228 Area 1617308
Q 506.00>78.05 (-) 5.90e5



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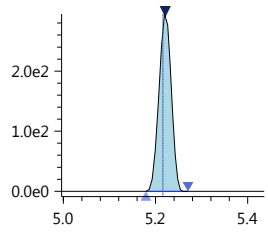
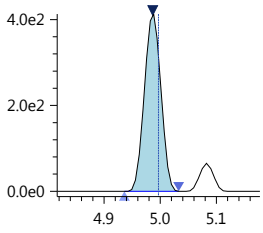
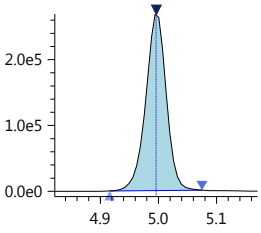
RT 5.221 Area 554
Q 498.20>78.00 (-) 2.95e2



N-MeFOSAA
Conc 0.0123
RT 4.987 Area 851
Q 570.20>419.00 (-) 4.13e2



N-MeFOSAA-d3
Conc 5.0119
RT 4.997 Area 661068
Q 572.80>419.05 (-) 2.69e5



N-MeFOSAA-d3_IS
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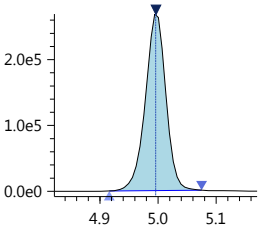
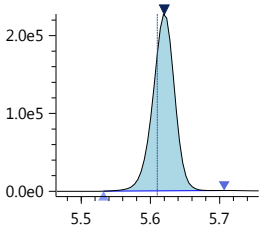
RT 4.997 Area 661068
ISTD 572.80>419.05 (-) 2.69e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.620 Area 502200
ISTD 514.90>168.90 (-) 2.28e5



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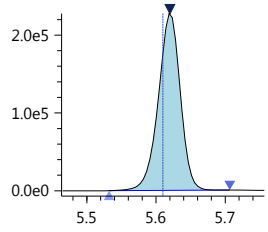
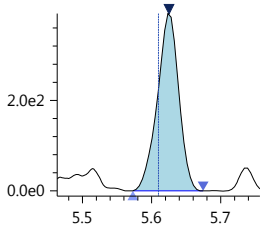
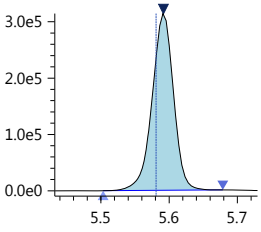
Conc 5.2955
RT 5.620 Area 502200
Q 514.90>168.90 (-) 2.28e5



N-MeFOSA
Conc 0.0064
RT 5.625 Area 847
Q 512.00>169.10 (-) 3.92e2



N-MeFOSE-d7
Conc 4.9613
RT 5.592 Area 683476
Q 622.70>59.10 (-) 3.15e5



N-MeFOSE-d7_IS
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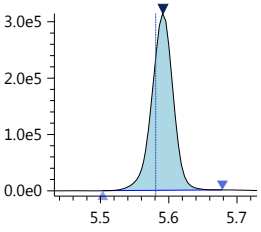
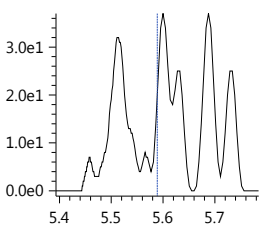
RT 5.592 Area 683476
ISTD 622.70>59.10 (-) 3.15e5



N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 3.70e1



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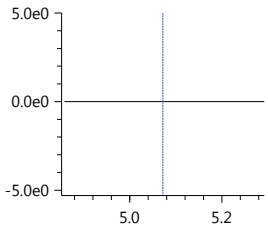
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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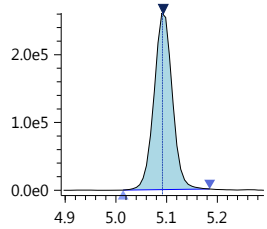
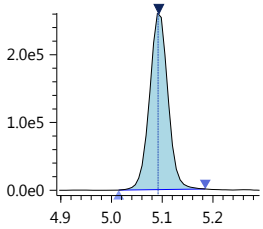
Conc 5.0000
RT 5.093 Area 658016
ISTD 588.80>419.00 (-) 2.62e5



N-EtFOSAA-d5
Conc 5.1964
RT 5.093 Area 658016
Q 588.80>419.00 (-) 2.62e5



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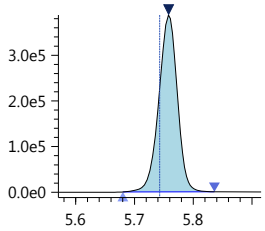
RT 5.758 Area 848561
ISTD 530.90>169.15 (-) 3.88e5



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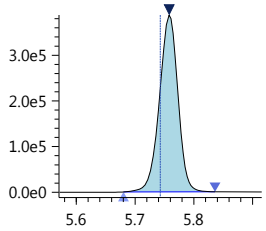
RT 5.758 Area 848561
Q 530.90>169.15 (-) 3.88e5



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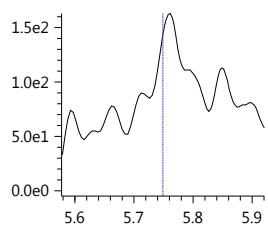
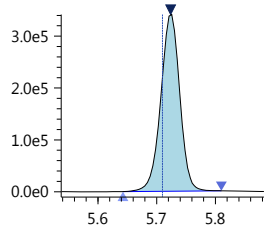
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.63e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 767492
ISTD 638.70>59.10 (-) 3.42e5



N-EtFOSE-d9
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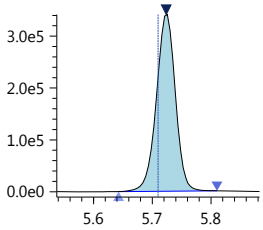
Q 638.70>59.10 (-) 3.42e5



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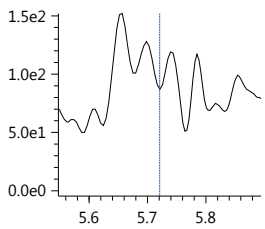
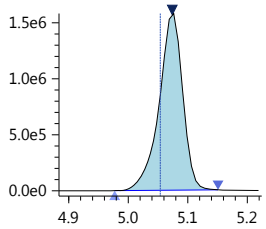
Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 1.52e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.074 Area 4346703
ISTD 570.00>525.00 (-) 1.58e6



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Printed at 1/18/2019 8:51:07 AM

010419_120

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Date acquired: 1/5/2019 11:13:58 AM
Acquired by: System Administrator
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PFBA-13C_IS
Conc 5.0000
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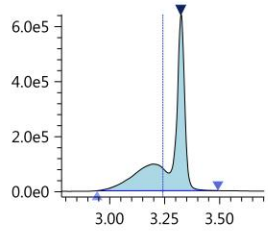
ISTD 216.90>172.15 (-) 6.44e5



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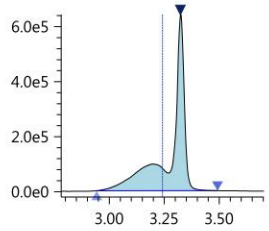

PFBA
Conc ----
RT ---- Area ----
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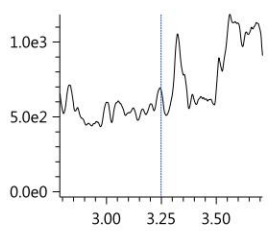

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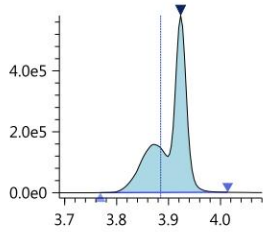
Conc 5.0000
RT 3.923 Area 1472177
ISTD 267.90>223.00 (-) 5.82e5



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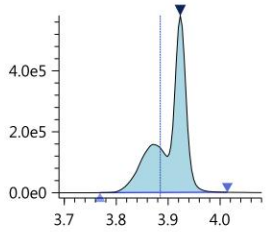
RT 3.923 Area 1472177
Q 267.90>223.00 (-) 5.82e5



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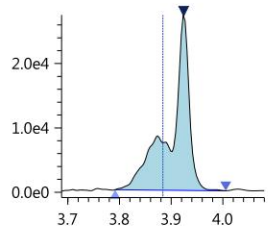
Q 263.05>219.10 (-) 2.75e4



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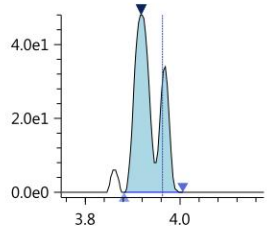
Conc 0.0009
RT 3.918 Area 151
Q 299.00>80.00 (-) 4.80e1



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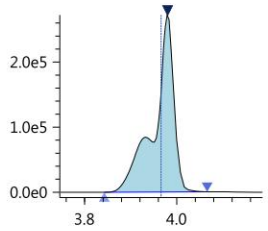
RT 3.980 Area 800093
Q 301.80>80.00 (-) 2.72e5



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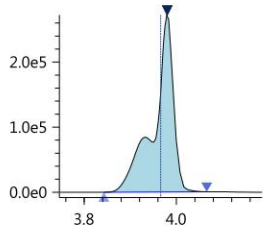

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RT 4.189 Area 5142954
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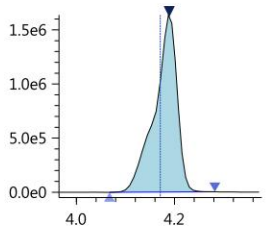

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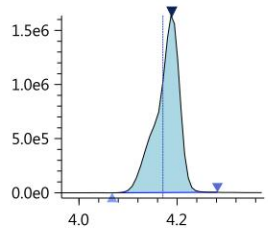

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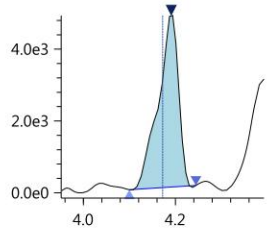
Conc 0.0140
RT 4.191 Area 14622
Q 313.00>269.00 (-) 4.94e3



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Conc 0.0026
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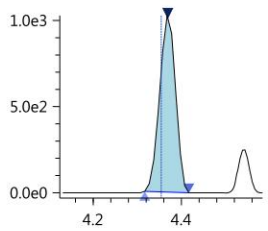
Q 362.90>319.00 (-) 1.03e3



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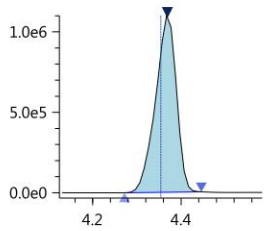
RT 4.369 Area 3608201
ISTD 366.90>322.10 (-) 1.10e6



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Conc 4.6343
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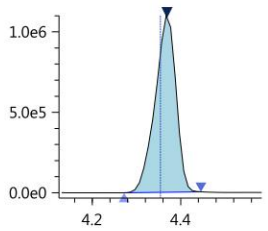

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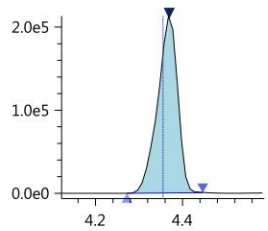
RT 4.369 Area 681264
ISTD 402.70>84.05 (-) 2.13e5



PFHxS-18O
Conc 5.6768
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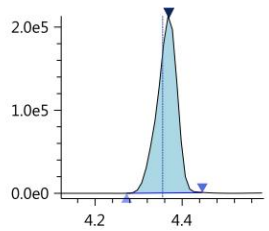
Q 402.70>84.05 (-) 2.13e5



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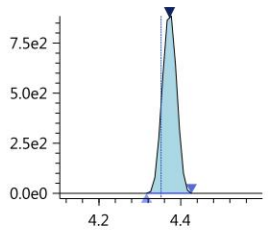
Conc 0.0174
RT 4.373 Area 2283
Q 399.00>80.00 (-) 8.85e2



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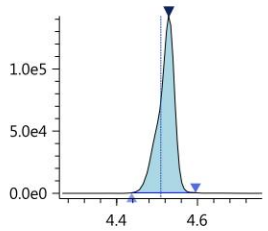
Conc 3.4677
RT 4.529 Area 374410
Q 428.90>409.00 (-) 1.43e5



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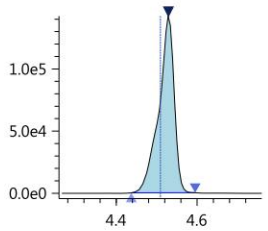
ISTD 428.90>409.00 (-) 1.43e5



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6_2-FTS_1
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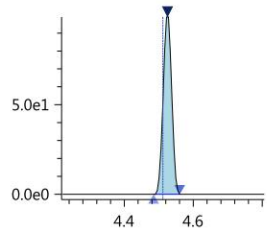
RT 4.525 Area 172
Q 427.00>407.00 (-) 9.90e1



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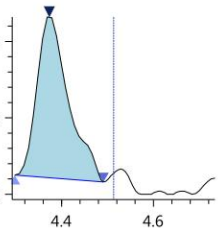

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Conc 5.0000
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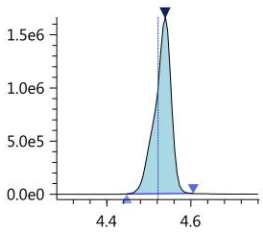
ISTD 416.80>372.05 (-) 1.67e6



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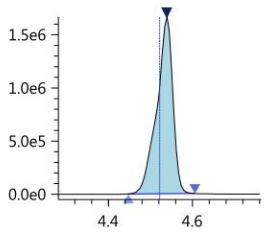

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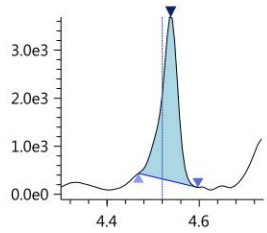
Q 413.00>369.00 (-) 3.69e3



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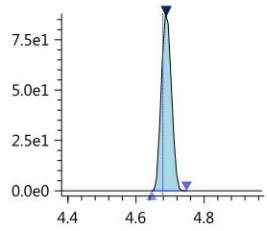
Conc 0.0022
RT 4.689 Area 184
Q 499.00>80.00 (-) 8.80e1



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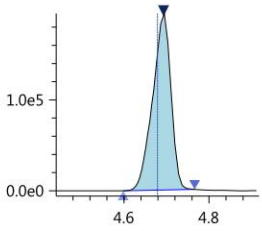
Conc 5.0000
RT 4.693 Area 580127
ISTD 502.80>80.05 (-) 1.95e5



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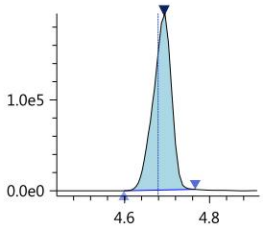

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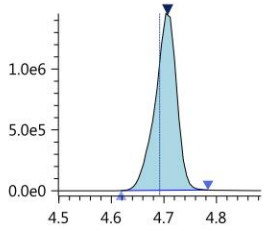
RT 4.707 Area 4157227
ISTD 467.80>423.00 (-) 1.46e6



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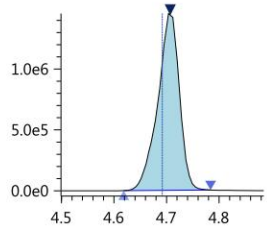

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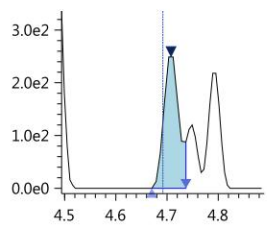
RT 4.708 Area 520
Q 463.00>418.90 (-) 3.36e2



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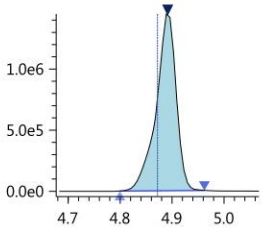
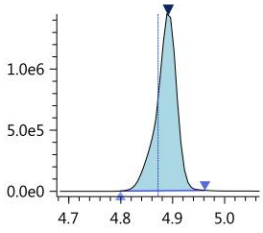
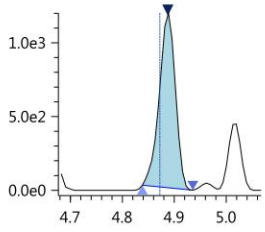


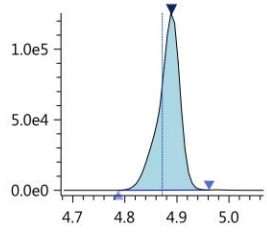
PFDA-13C
Conc 5.1563
RT 4.892 Area 3887083
Q 514.80>469.95 (-) 1.45e6



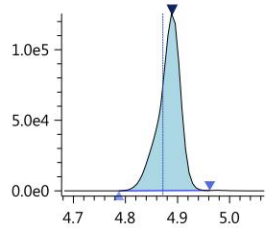
PFDA
Conc 0.0039
RT 4.888 Area 2558
Q 513.00>468.80 (-) 1.20e3



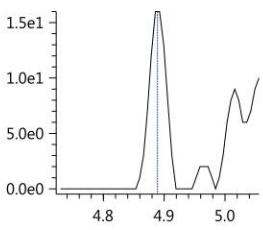
8_2-FTS-13C_IS
Conc 5.0000
RT 4.890 Area 350770
ISTD 528.80>509.00 (-) 1.26e5



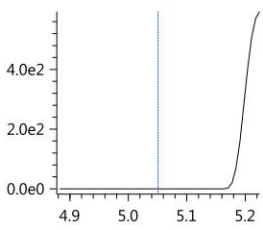
8_2-FTS-13C
Conc 4.1774
RT 4.890 Area 350770
Q 528.80>509.00 (-) 1.26e5



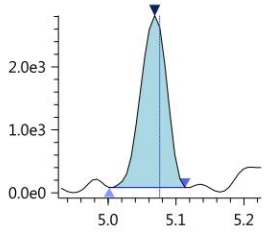
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.60e1



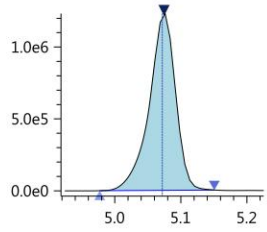
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 5.94e2



PFUnA
Conc 0.0131
RT 5.069 Area 7364
Q 563.00>518.90 (-) 2.82e3



PFUnA-13C_IS
Conc 5.0000
RT 5.074 Area 3402736
ISTD 564.80>519.95 (-) 1.23e6



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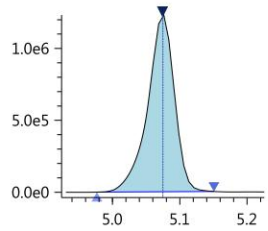
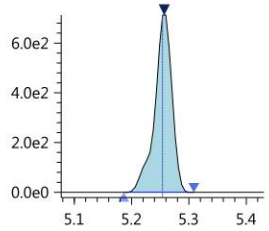
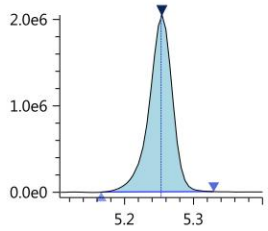
PFUnA-13C
Conc 4.8242
RT 5.074 Area 3402736
Q 564.80>519.95 (-) 1.23e6



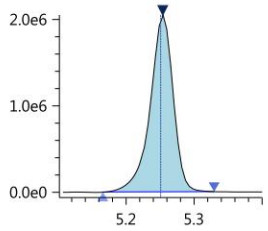
PFDoA
Conc 0.0125
RT 5.257 Area 1501
Q 613.05>569.00 (-) 7.13e2



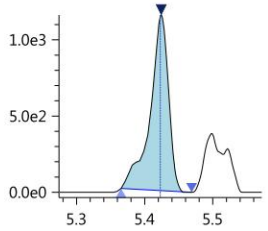
PFDoA-13C
Conc 4.7039
RT 5.254 Area 4814175
Q 614.80>569.95 (-) 2.05e6



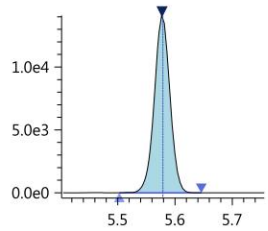
PFDoA-13C_IS
Conc 5.0000
RT 5.254 Area 4814175
ISTD 614.80>569.95 (-) 2.05e6



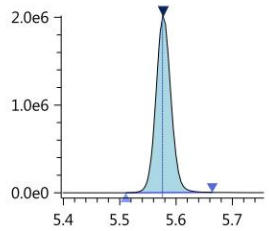
PFTrDA
Conc 0.0011
RT 5.424 Area 2165
Q 663.00>618.90 (-) 1.16e3



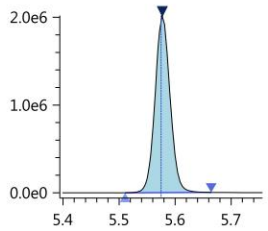
PFTeDA
Conc 0.0046
RT 5.578 Area 26928
Q 713.40>669.00 (-) 1.41e4



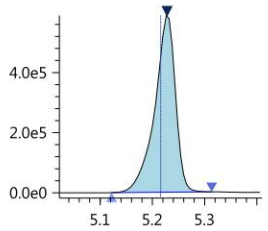
PFTeDA-13C
Conc 5.1693
RT 5.577 Area 3785537
Q 714.70>669.90 (-) 2.02e6



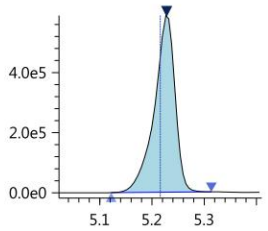
PFTeDA-13C_IS
Conc 5.0000
RT 5.577 Area 3785537
ISTD 714.70>669.90 (-) 2.02e6



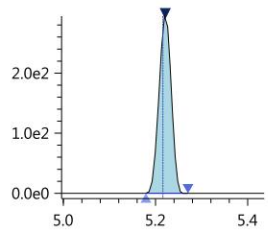
FOSA-13C_IS
Conc 5.0000
RT 5.228 Area 1617308
ISTD 506.00>78.05 (-) 5.90e5



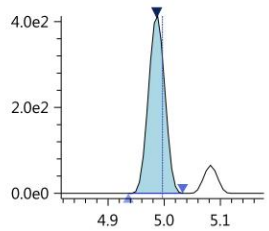
FOSA-13C
Conc 4.8529
RT 5.228 Area 1617308
Q 506.00>78.05 (-) 5.90e5



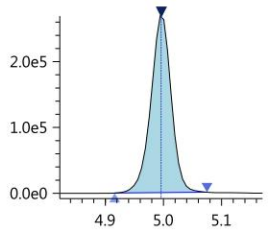
FOSA
Conc 0.0013
RT 5.221 Area 554
Q 498.20>78.00 (-) 2.95e2



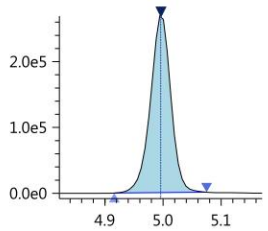
N-MeFOSAA
Conc 0.0123
RT 4.987 Area 851
Q 570.20>419.00 (-) 4.13e2



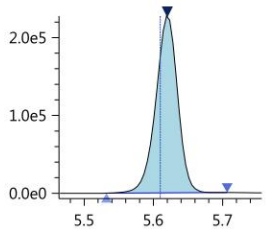
N-MeFOSAA-d3
Conc 5.0119
RT 4.997 Area 661068
Q 572.80>419.05 (-) 2.69e5



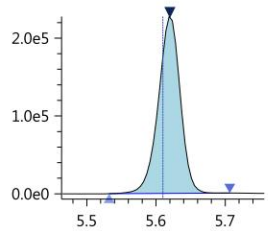
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.997 Area 661068
ISTD 572.80>419.05 (-) 2.69e5



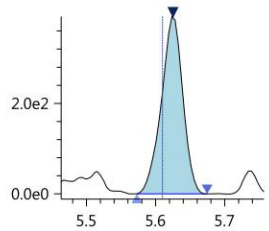
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.620 Area 502200
ISTD 514.90>168.90 (-) 2.28e5



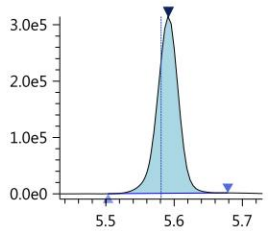
N-MeFOSA-d3
Conc 5.2955
RT 5.620 Area 502200
Q 514.90>168.90 (-) 2.28e5



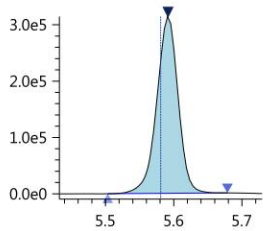
N-MeFOSA
Conc 0.0064
RT 5.625 Area 847
Q 512.00>169.10 (-) 3.92e2



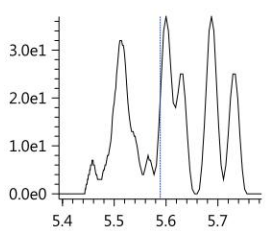
N-MeFOSE-d7
Conc 4.9613
RT 5.592 Area 683476
Q 622.70>59.10 (-) 3.15e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 683476
ISTD 622.70>59.10 (-) 3.15e5



N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 3.70e1



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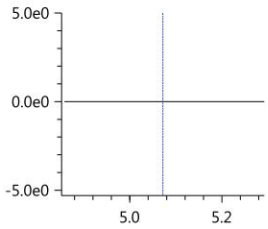
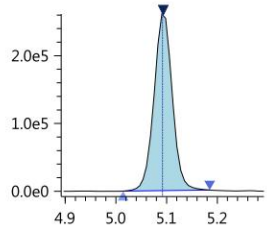
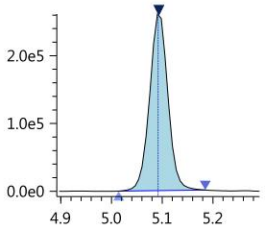
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.093 Area 658016
ISTD 588.80>419.00 (-) 2.62e5



N-EtFOSAA-d5
Conc 5.1964
RT 5.093 Area 658016
Q 588.80>419.00 (-) 2.62e5



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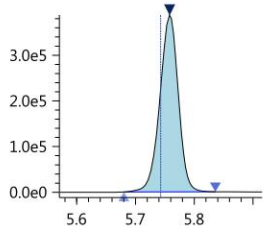
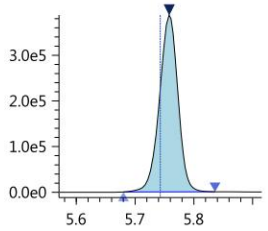
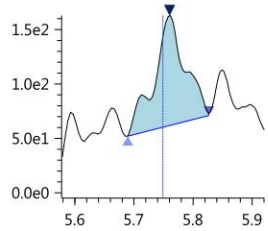
Conc 5.0000
RT 5.758 Area 848561
ISTD 530.90>169.15 (-) 3.88e5



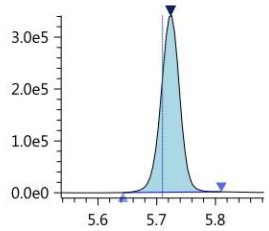
N-EtFOSA-d9
Conc 5.3363
RT 5.758 Area 848561
Q 530.90>169.15 (-) 3.88e5



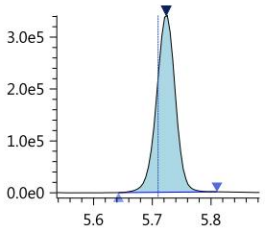
N-EtFOSA
Conc 0.0122
RT 5.760 Area 368
Q 526.90>169.10 (-) 1.63e2



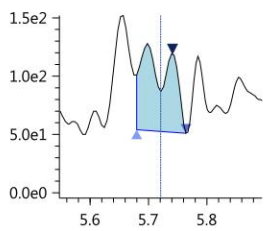
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 767492
ISTD 638.70>59.10 (-) 3.42e5



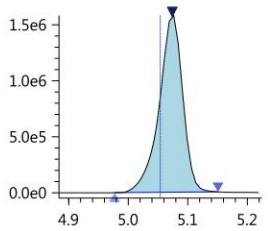
N-EtFOSE-d9
Conc 5.1621
RT 5.724 Area 767492
Q 638.70>59.10 (-) 3.42e5



N-EtFOSE
Conc 0.0014
RT 5.741 Area 258
Q 630.00>58.90 (-) 1.52e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.074 Area 4346703
ISTD 570.00>525.00 (-) 1.58e6



1st CM 01/28/19
2nd 01/28/19

Validation Report

Data File: J:\LCMS06\Data\190125_b6\190125_072
Lab ID: KQ1901091-02
RunType: CCB
Matrix: Water

Date Acquired: 1/25/19 20:15
Batch ID: 623320
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C8-FOSA	118	18	109	High bias ND

Primary Review: _____

Printed: 1/28/19 12:39
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/28/19
2nd 01/29/19

Quantitation Report

Data File:	J:\LCMS06\Data\190125_b6\190125_072	**Instrument:**	K-LCMS-06
Acqu Date:	1/25/19 20:15	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1901091-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	1/22/19	**Receive Date:**	1/23/19

Analysis Lot:	623320	**Prep Lot:**		**Report Group:**	KQ1901091
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900021
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.076	+0.01	4963451	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	3.977	+0.00	1040092	5.3310	107		20 - 109	Y
18O2-PFHxS	4.368	+0.01	630607	5.7098	114		26 - 122	Y
13C4-PFOS	4.694	+0.01	696923	5.5968	112		25 - 121	Y
13C4-PFBA	3.334	+0.00	3114860	5.8139	116		27 - 124	Y
13C5-PFPeA	3.922	+0.00	1771409	5.4303	109		27 - 138	Y
13C2-PFHxA	4.186	+0.01	5645590	5.0866	102		28 - 132	Y
13C4-PFHpA	4.368	+0.01	6072948	6.6607	133		19 - 139	Y
13C4-PFOA	4.538	+0.01	6010231	5.7858	116		22 - 130	Y
13C5-PFNA	4.708	+0.01	5524557	6.1662	123		20 - 127	Y
13C2-PFDA	4.893	+0.01	4994233	6.0164	120		24 - 125	Y
13C2-PFUnDA	5.077	+0.01	4121924	5.1053	102		22 - 125	Y
13C2-PFDoDA	5.257	+0.01	5416769	4.9083	98		19 - 122	Y
13C2-PFTeDA	5.580	+0.01	3868444	4.4500	89		13 - 124	Y
13C8-FOSA	5.227	+0.01	2029681	5.8761	118	*	18 - 109	Y
D3-MeFOSA	5.617	+0.01	586523	4.8103	96		15 - 153	Y
D5-EtFOSA	5.757	+0.01	871048	4.5751	92		25 - 107	Y
D7-MeFOSE	5.588	+0.00	723520	4.9045	98		24 - 112	Y
D9-EtFOSE	5.722	+0.01	804807	4.9489	99		19 - 109	Y
13C2-6:2 FTS	4.528	+0.01	517566	6.6154	132		10 - 226	Y
13C2-8:2 FTS	4.891	+0.01	336919	5.4623	109		10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?

1st CM 01/28/19

2nd 01/29/19

Data File:	J:\LCMS06\Data\190125_b6\190125_072	**Instrument:**	K-LCMS-06
Acqu Date:	1/25/19 20:15	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1901091-02	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.972	+0.00	292	0.0014	0.045	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.370	+0.01	1081	0.0086	0.28	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.697	+0.01	500	0.0050	0.16	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.922	+0.00	108576	0.0319	1.0	U	Y
Perfluorohexanoic acid (PFHxA)	4.164	-0.02	37505	0.0377	1.2	U	Y
Perfluoroheptanoic acid (PFHpA)	4.355	-0.01	20826	0.0271	0.87	J	Y
Perfluorooctanoic acid (PFOA)	4.524	-0.01	32452	0.0277	0.89	J	Y
Perfluorononanoic acid (PFNA)	4.683	-0.02	22967	0.0344	1.1	J	Y
Perfluorodecanoic acid (PFDA)	4.871	-0.02	14361	0.0170	0.54	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.066	-0.01	18335	0.0222	0.71	U	Y
Perfluorododecanoic acid (PFDoDA)	5.244	-0.01	8069	0.0165	0.53	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.424	+0.00	7698	0.0149	0.48	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.579	+0.01	29917	0.0194	0.62	U	Y
Perfluorooctane sulfonamide (FOSA)	5.222	+0.00	518	0.0010	0.032	U	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.613	0.00	1058	0.0071	0.23	U	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.762	+0.01	455	0.0164	0.52	J	Y
N-Methyl perfluorooctane sulfonamidoethanol	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoethanol	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.533	+0.01	606	0.0059	0.19	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0		0	0	0	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

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Insight Report

Printed at 1/28/2019 12:21:32 PM

190125_072

Sample ID: IB
Date acquired: 1/25/2019 8:15:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190125_b6\190125_072.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.334	3114860	3114860	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.334	3114860	4963451	26	5.8139	ng/mL	----
PFBA	ND(W/B)	----	----	3114860	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.922	1771409	1771409	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.922	1771409	4963451	26	5.4303	ng/mL	----
PFPeA	Auto	3.922	108576	1771409	4	0.0319	ng/mL	----
PFBS_1	Auto	3.972	292	1040092	16	0.0014	ng/mL	----
PFBS-13C	Auto	3.977	1040092	4963451	26	5.3310	ng/mL	----
PFBS-13C_IS	Auto	3.977	1040092	1040092	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.186	5645590	5645590	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.186	5645590	4963451	26	5.0866	ng/mL	----
PFHxA	Auto	4.164	37505	5645590	6	0.0377	ng/mL	----
PFHpA	Auto	4.355	20826	6072948	8	0.0271	ng/mL	----
PFHpA-13C_IS	Auto	4.368	6072948	6072948	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.368	6072948	4963451	26	6.6607	ng/mL	----
PFHxS-18O_IS	Auto	4.368	630607	630607	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.368	630607	4963451	26	5.7098	ng/mL	----
PFHxS_1	Auto	4.370	1081	630607	7	0.0086	ng/mL	----
6_2-FTS-13C	Auto	4.528	517566	4963451	26	6.6154	ng/mL	----
6_2-FTS-13C_IS	Auto	4.528	517566	517566	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.533	606	517566	10	0.0059	ng/mL	----
PFHpS_1	ND(W/B)	----	----	630607	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.538	6010231	6010231	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.538	6010231	4963451	26	5.7858	ng/mL	----
PFOA	Auto	4.524	32452	6010231	9	0.0277	ng/mL	----
PFOS_1	M	4.697	500	696923	13	0.0050	ng/mL	----
PFOS-13C_IS	Auto	4.694	696923	696923	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.694	696923	4963451	26	5.5968	ng/mL	----
PFNA-13C_IS	Auto	4.708	5524557	5524557	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.708	5524557	4963451	26	6.1662	ng/mL	----
PFNA	M	4.683	22967	5524557	11	0.0344	ng/mL	----
PFDA-13C_IS	Auto	4.893	4994233	4994233	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.893	4994233	4963451	26	6.0164	ng/mL	----
PFDA	M	4.871	14361	4994233	12	0.0170	ng/mL	----
8_2-FTS-13C_IS	Auto	4.891	336919	336919	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.891	336919	4963451	26	5.4623	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	336919	15	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	696923	13	----	ng/mL	----
PFUnA	Auto	5.066	18335	4121924	14	0.0222	ng/mL	----
PFUnA-13C_IS	Auto	5.077	4121924	4121924	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.077	4121924	4963451	26	5.1053	ng/mL	----
PFDoA	Auto	5.244	8069	5416769	17	0.0165	ng/mL	----
PFDoA-13C	Auto	5.257	5416769	4963451	26	4.9083	ng/mL	----
PFDoA-13C_IS	Auto	5.257	5416769	5416769	17	5.0000	ng/mL	----
PFTrDA	M	5.424	7698	3868444	22	0.0149	ng/mL	----
PFTeDA	Auto	5.579	29917	3868444	22	0.0194	ng/mL	----
PFTeDA-13C	Auto	5.580	3868444	4963451	26	4.4500	ng/mL	----
PFTeDA-13C_IS	Auto	5.580	3868444	3868444	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.227	2029681	2029681	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.227	2029681	4963451	26	5.8761	ng/mL	----
FOSA	Auto	5.222	518	2029681	18	0.0010	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.617	586523	586523	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.617	586523	4963451	26	4.8103	ng/mL	----
N-MeFOSA	M	5.613	1058	586523	1	0.0071	ng/mL	----
N-MeFOSE-d7	Auto	5.588	723520	4963451	26	4.9045	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.588	723520	723520	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	723520	20	----	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.757	871048	871048	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.757	871048	4963451	26	4.5751	ng/mL	----
N-EtFOSA	M	5.762	455	871048	23	0.0164	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.722	804807	804807	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.722	804807	4963451	26	4.9489	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	804807	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.076	4963451	4963451	26	5.0000	ng/mL	----

Insight Report

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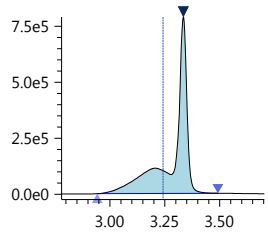
PFBA-13C_IS
Conc 5.0000
RT 3.334 Area 3114860
ISTD 216.90>172.15 (-) 7.92e5



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Conc 5.8139
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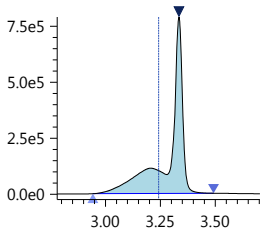
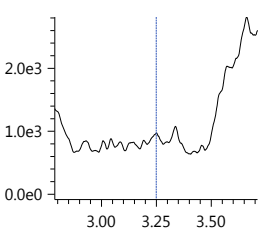
Q 216.90>172.15 (-) 7.92e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 2.82e3



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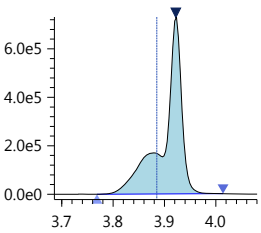

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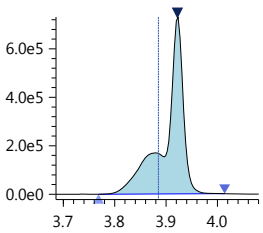
Conc 5.4303
RT 3.922 Area 1771409
Q 267.90>223.00 (-) 7.31e5



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Conc 0.0319
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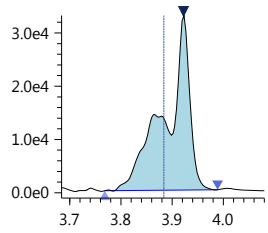

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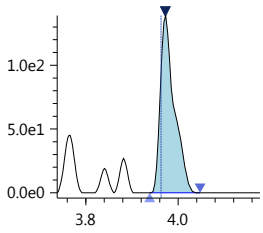
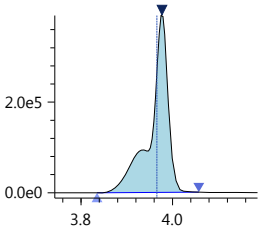
RT 3.972 Area 292
Q 299.00>80.00 (-) 1.39e2



PFBS-13C
Conc 5.3310
RT 3.977 Area 1040092
Q 301.80>80.00 (-) 3.91e5



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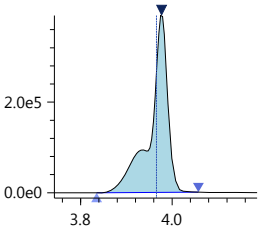
ISTD 301.80>80.00 (-) 3.91e5



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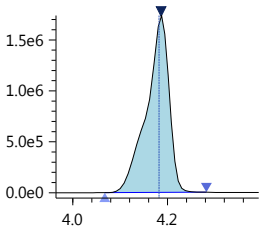

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RT 4.186 Area 5645590
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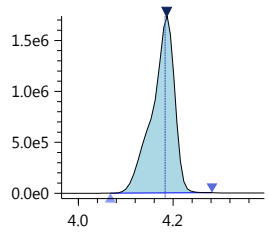

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RT 4.164 Area 37505
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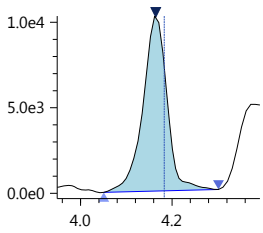

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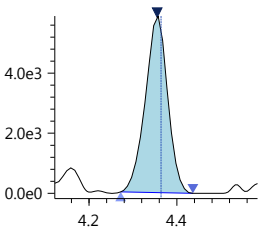
Conc 0.0271
RT 4.355 Area 20826
Q 362.90>319.00 (-) 5.90e3



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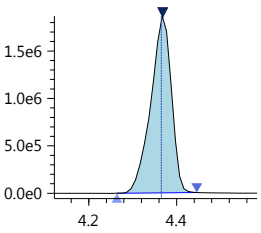
Conc 5.0000
RT 4.368 Area 6072948
ISTD 366.90>322.10 (-) 1.87e6



PFHpA-13C
Conc 6.6607
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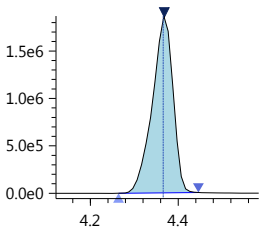

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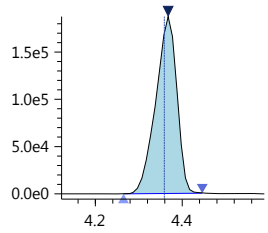
ISTD 402.70>84.05 (-) 1.88e5



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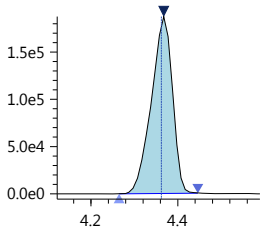

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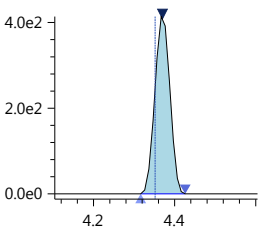

6_2-FTS-13C
Conc 6.6154
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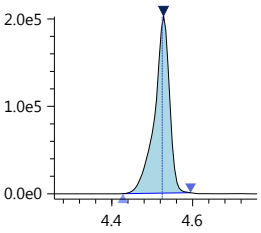
Q 428.90>409.00 (-) 2.03e5



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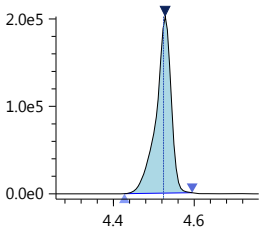

Insight Report

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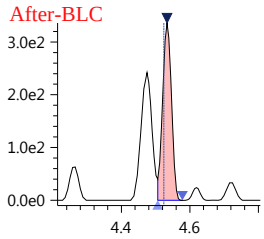
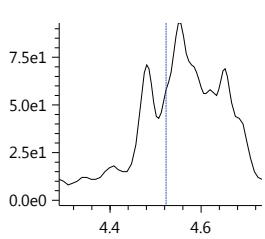
Conc 0.0059
RT 4.533 Area 606
Q 427.00>407.00 (-) 3.36e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 9.30e1



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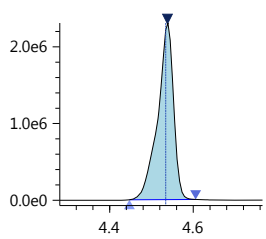
ISTD 416.80>372.05 (-) 2.31e6



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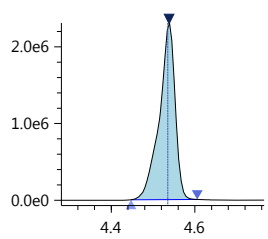
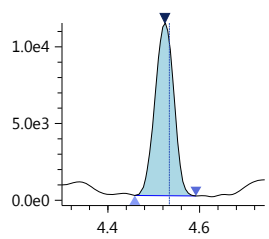
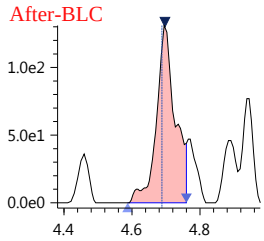


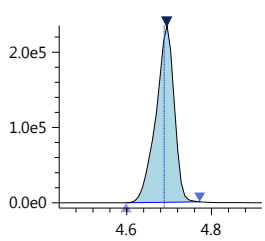
PFOA
Conc 0.0277
RT 4.524 Area 32452
Q 413.00>369.00 (-) 1.16e4



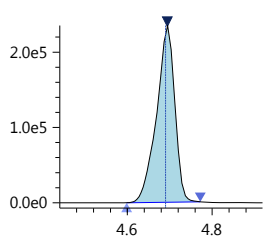
PFOS_1
Conc 0.0050
RT 4.697 Area 500
Q 499.00>80.00 (-) 1.31e2



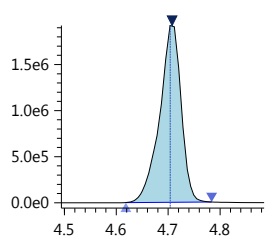
PFOS-13C_IS
Conc 5.0000
RT 4.694 Area 696923
ISTD 502.80>80.05 (-) 2.35e5



PFOS-13C
Conc 5.5968
RT 4.694 Area 696923
Q 502.80>80.05 (-) 2.35e5



PFNA-13C_IS
Conc 5.0000
RT 4.708 Area 5524557
ISTD 467.80>423.00 (-) 1.92e6



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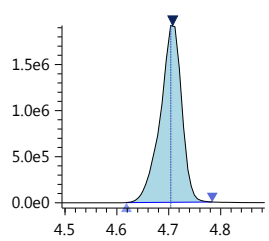
RT 4.708 Area 5524557
Q 467.80>423.00 (-) 1.92e6



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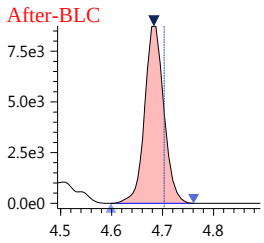
Conc 0.0344
RT 4.683 Area 22967
Q 463.00>418.90 (-) 8.74e3



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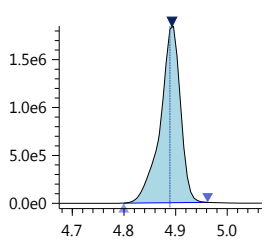
Conc 5.0000
RT 4.893 Area 4994233
ISTD 514.80>469.95 (-) 1.85e6



PFDA-13C
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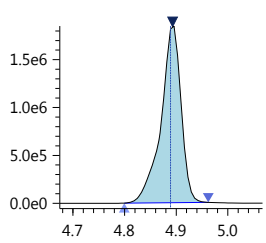
RT 4.893 Area 4994233
Q 514.80>469.95 (-) 1.85e6



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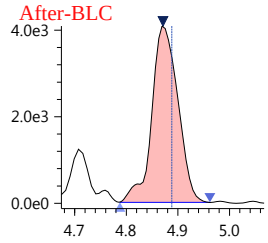
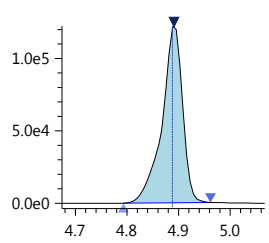
Conc 0.0170
RT 4.871 Area 14361
Q 513.00>468.80 (-) 4.10e3



8_2-FTS-13C_IS
Conc 5.0000
RT 4.891 Area 336919
ISTD 528.80>509.00 (-) 1.22e5



8_2-FTS-13C
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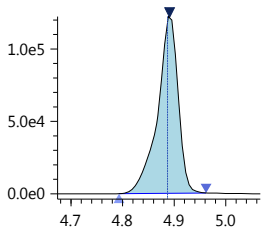
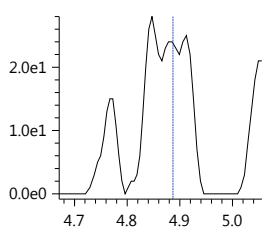
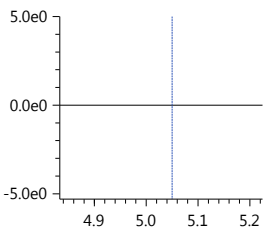
RT 4.891 Area 336919
Q 528.80>509.00 (-) 1.22e5



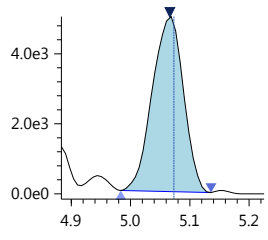
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.80e1



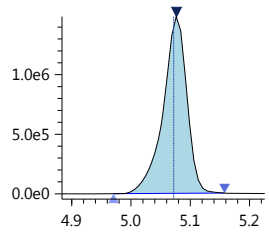
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0222
RT 5.066 Area 18335
Q 563.00>518.90 (-) 5.06e3



PFUnA-13C_IS
Conc 5.0000
RT 5.077 Area 4121924
ISTD 564.80>519.95 (-) 1.49e6



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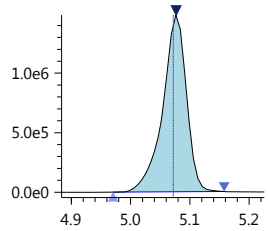
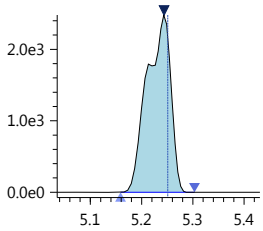
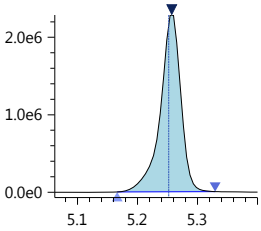
PFUnA-13C
Conc 5.1053
RT 5.077 Area 4121924
Q 564.80>519.95 (-) 1.49e6



PFDoA
Conc 0.0165
RT 5.244 Area 8069
Q 613.05>569.00 (-) 2.48e3



PFDoA-13C
Conc 4.9083
RT 5.257 Area 5416769
Q 614.80>569.95 (-) 2.29e6



PFDoA-13C_IS
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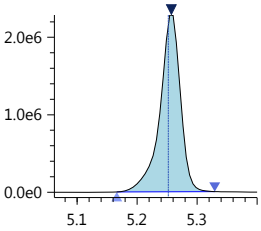
RT 5.257 Area 5416769
ISTD 614.80>569.95 (-) 2.29e6



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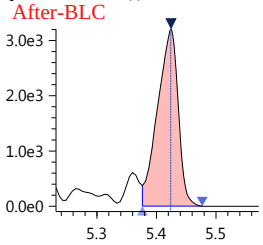
Conc 0.0149
RT 5.424 Area 7698
Q 663.00>618.90 (-) 3.21e3
After-BLC



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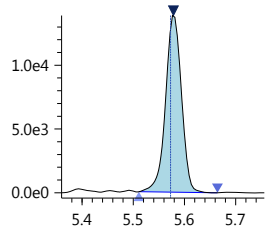
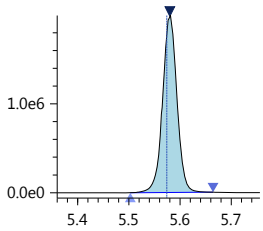
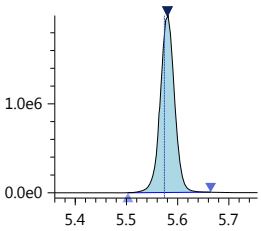
Conc 0.0194
RT 5.579 Area 29917
Q 713.40>669.00 (-) 1.39e4



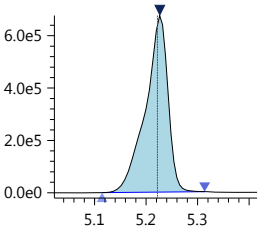
PFTeDA-13C
Conc 4.4500
RT 5.580 Area 3868444
Q 714.70>669.90 (-) 1.99e6



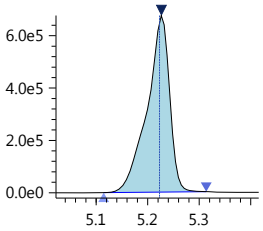
PFTeDA-13C_IS
Conc 5.0000
RT 5.580 Area 3868444
ISTD 714.70>669.90 (-) 1.99e6



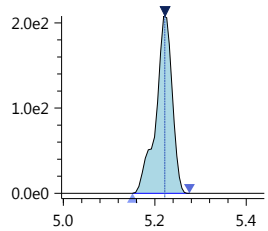
FOSA-13C_IS
Conc 5.0000
RT 5.227 Area 2029681
ISTD 506.00>78.05 (-) 6.77e5



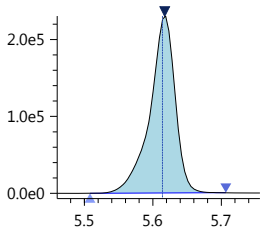
FOSA-13C
Conc 5.8761
RT 5.227 Area 2029681
Q 506.00>78.05 (-) 6.77e5



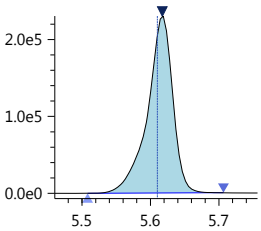
FOSA
Conc 0.0010
RT 5.222 Area 518
Q 498.20>78.00 (-) 2.08e2



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 586523
ISTD 514.90>168.90 (-) 2.31e5



N-MeFOSA-d3
Conc 4.8103
RT 5.617 Area 586523
Q 514.90>168.90 (-) 2.31e5



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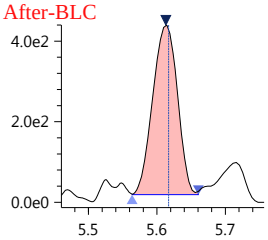
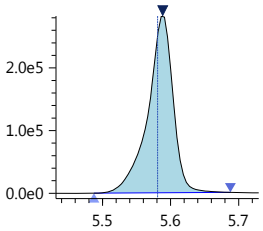
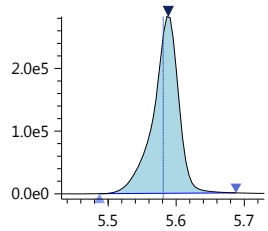
Conc 0.0071
RT 5.613 Area 1058
Q 512.00>169.10 (-) 4.40e2
After-BLC



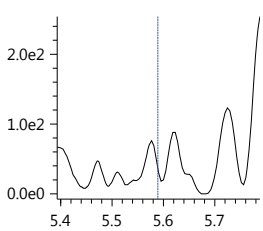
N-MeFOSE-d7
Conc 4.9045
RT 5.588 Area 723520
Q 622.70>59.10 (-) 2.83e5



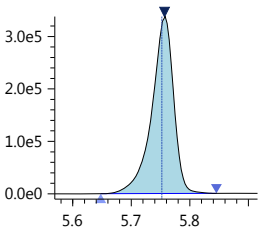
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 723520
ISTD 622.70>59.10 (-) 2.83e5



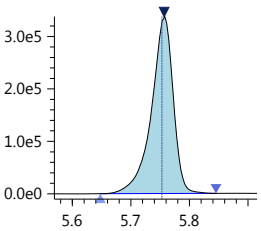
N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 2.54e2



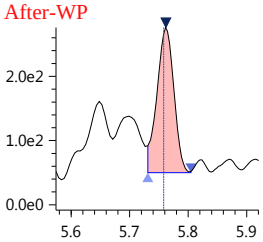
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.757 Area 871048
ISTD 530.90>169.15 (-) 3.38e5



N-EtFOSA-d9
Conc 4.5751
RT 5.757 Area 871048
Q 530.90>169.15 (-) 3.38e5



N-EtFOSA
Conc 0.0164
RT 5.762 Area 455
Q 526.90>169.10 (-) 2.76e2
After-WP



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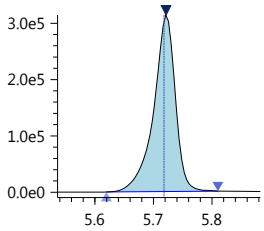
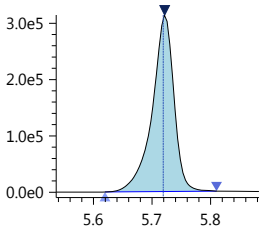
N-EtFOSE-d9_IS

Conc 5.0000
RT 5.722 Area 804807
ISTD 638.70>59.10 (-) 3.15e5



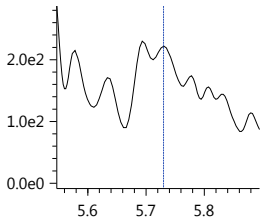
N-EtFOSE-d9

Conc 4.9489
RT 5.722 Area 804807
Q 638.70>59.10 (-) 3.15e5



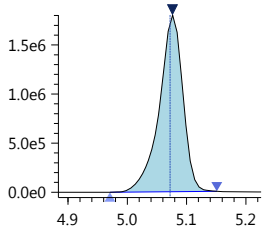
N-EtFOSE

Conc ----
RT ---- Area ----
Q 630.00>58.90 (-) 2.87e2



13C7-PFUnDA_IS

Conc 5.0000
RT 5.076 Area 4963451
ISTD 570.00>525.00 (-) 1.81e6



Insight Report

Printed at 1/28/2019 12:09:19 PM

190125_072

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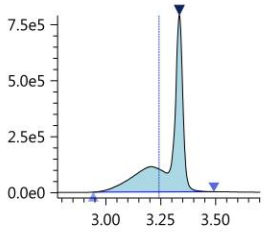
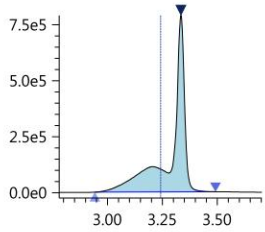
Date acquired: 1/25/2019 8:15:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190125_b6\190125_072.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

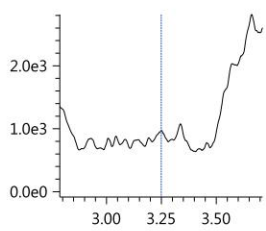
PFBA-13C_IS
Conc 5.0000
RT 3.334 Area 3114860
ISTD 216.90>172.15 (-) 7.92e5



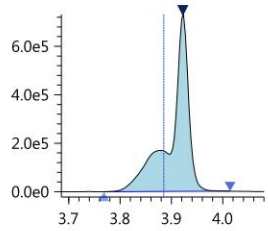
PFBA-13C
Conc 5.8139
RT 3.334 Area 3114860
Q 216.90>172.15 (-) 7.92e5



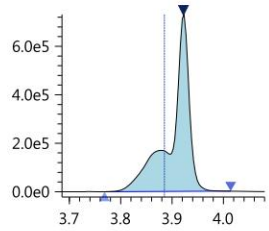
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 2.82e3



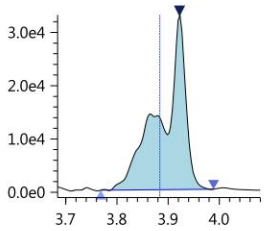
PFPeA-13C_IS
Conc 5.0000
RT 3.922 Area 1771409
ISTD 267.90>223.00 (-) 7.31e5



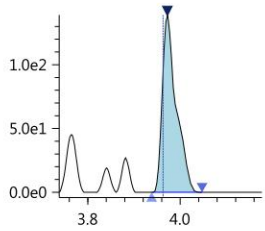
PFPeA-13C
Conc 5.4303
RT 3.922 Area 1771409
Q 267.90>223.00 (-) 7.31e5



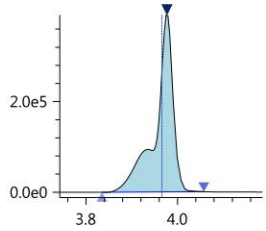
PFPeA
Conc 0.0319
RT 3.922 Area 108576
Q 263.05>219.10 (-) 3.33e4



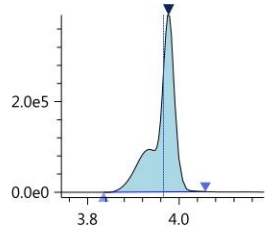
PFBS_1
Conc 0.0014
RT 3.972 Area 292
Q 299.00>80.00 (-) 1.39e2



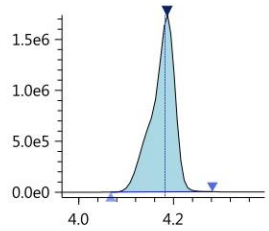
PFBS-13C
Conc 5.3310
RT 3.977 Area 1040092
Q 301.80>80.00 (-) 3.91e5



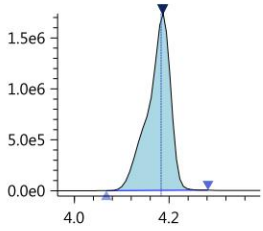
PFBS-13C_IS
Conc 5.0000
RT 3.977 Area 1040092
ISTD 301.80>80.00 (-) 3.91e5



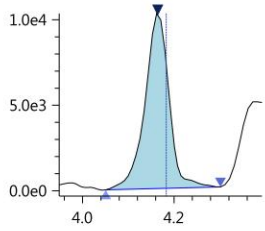
PFHxA-13C_IS
Conc 5.0000
RT 4.186 Area 5645590
ISTD 314.90>270.10 (-) 1.74e6



PFHxA-13C
Conc 5.0866
RT 4.186 Area 5645590
Q 314.90>270.10 (-) 1.74e6



PFHxA
Conc 0.0377
RT 4.164 Area 37505
Q 313.00>269.00 (-) 1.04e4



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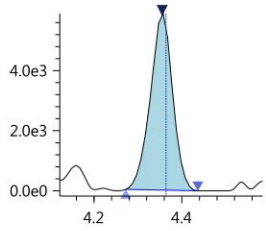
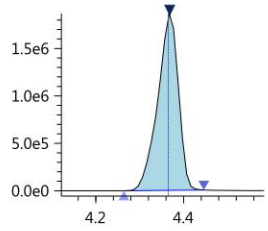
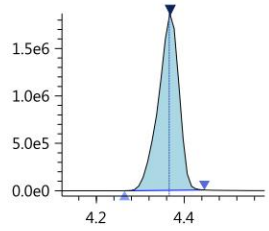
Conc 0.0271
RT 4.355 Area 20826
Q 362.90>319.00 (-) 5.90e3



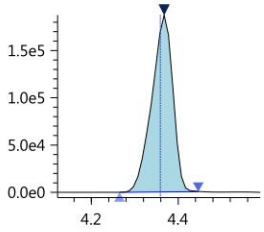
PFHpA-13C_IS
Conc 5.0000
RT 4.368 Area 6072948
ISTD 366.90>322.10 (-) 1.87e6



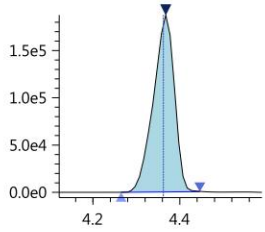
PFHpA-13C
Conc 6.6607
RT 4.368 Area 6072948
Q 366.90>322.10 (-) 1.87e6



PFHxS-18O_IS
Conc 5.0000
RT 4.368 Area 630607
ISTD 402.70>84.05 (-) 1.88e5



PFHxS-18O
Conc 5.7098
RT 4.368 Area 630607
Q 402.70>84.05 (-) 1.88e5



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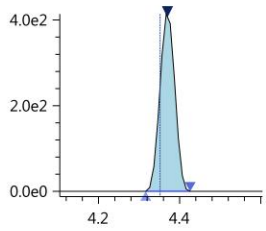
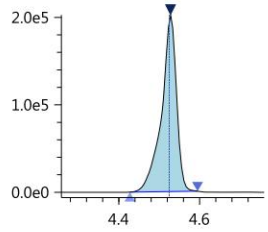
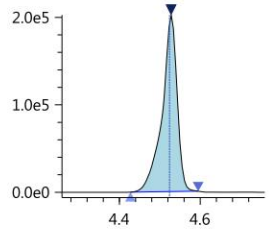
Conc 0.0086
RT 4.370 Area 1081
Q 399.00>80.00 (-) 4.14e2



6_2-FTS-13C
Conc 6.6154
RT 4.528 Area 517566
Q 428.90>409.00 (-) 2.03e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.528 Area 517566
ISTD 428.90>409.00 (-) 2.03e5



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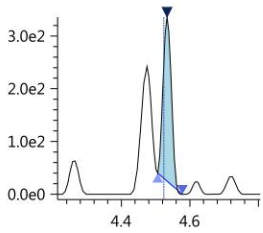
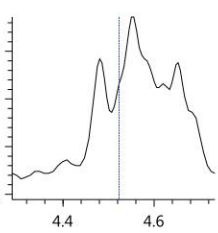
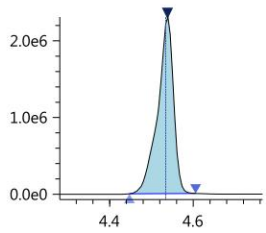
6_2-FTS_1
Conc 0.0051
RT 4.533 Area 520
Q 427.00>407.00 (-) 3.36e2



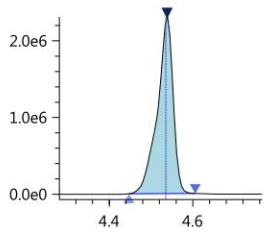
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 9.30e1



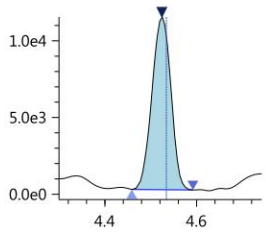
PFOA-13C_IS
Conc 5.0000
RT 4.538 Area 6010231
ISTD 416.80>372.05 (-) 2.31e6



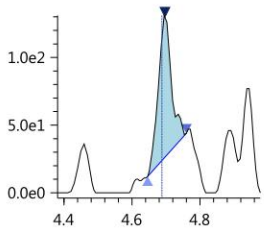
PFOA-13C
Conc 5.7858
RT 4.538 Area 6010231
Q 416.80>372.05 (-) 2.31e6



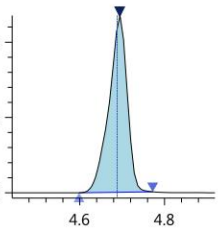
PFOA
Conc 0.0277
RT 4.524 Area 32452
Q 413.00>369.00 (-) 1.16e4



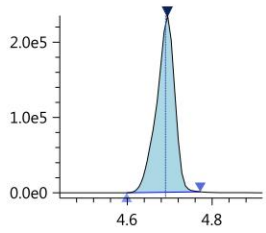
PFOS_1
Conc 0.0028
RT 4.697 Area 282
Q 499.00>80.00 (-) 1.31e2



PFOS-13C_IS
Conc 5.0000
RT 4.694 Area 696923
ISTD 502.80>80.05 (-) 2.35e5



PFOS-13C
Conc 5.5968
RT 4.694 Area 696923
Q 502.80>80.05 (-) 2.35e5



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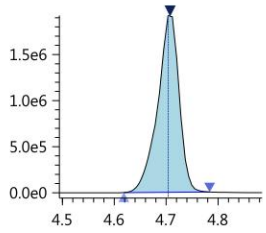
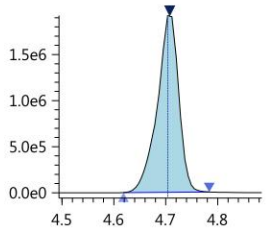
Conc 5.0000
RT 4.708 Area 5524557
ISTD 467.80>423.00 (-) 1.92e6



PFNA-13C
Conc 6.1662
RT 4.708 Area 5524557
Q 467.80>423.00 (-) 1.92e6



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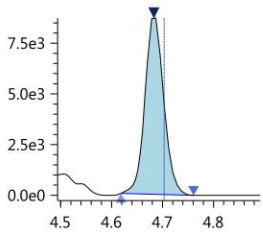
Conc 0.0339
RT 4.683 Area 22536
Q 463.00>418.90 (-) 8.74e3



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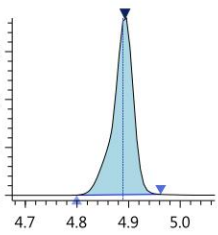
Conc 5.0000
RT 4.893 Area 4994233
ISTD 514.80>469.95 (-) 1.85e6



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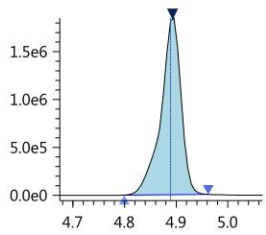
Conc 6.0164
RT 4.893 Area 4994233
Q 514.80>469.95 (-) 1.85e6



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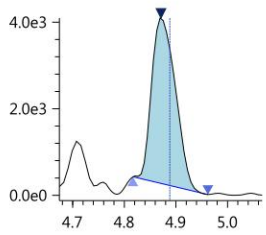
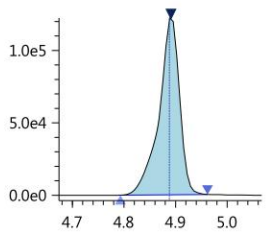
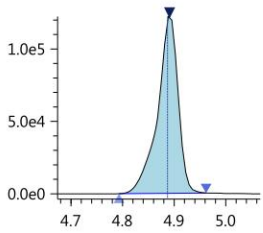
Conc 0.0145
RT 4.871 Area 12263
Q 513.00>468.80 (-) 4.10e3



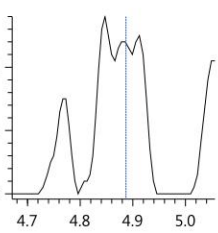
8_2-FTS-13C_IS
Conc 5.0000
RT 4.891 Area 336919
ISTD 528.80>509.00 (-) 1.22e5



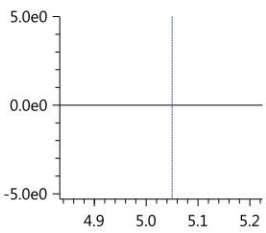
8_2-FTS-13C
Conc 5.4623
RT 4.891 Area 336919
Q 528.80>509.00 (-) 1.22e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.80e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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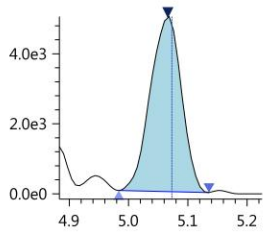
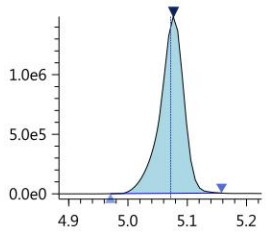
Conc 0.0222
RT 5.066 Area 18335
Q 563.00>518.90 (-) 5.06e3



PFUnA-13C_IS
Conc 5.0000
RT 5.077 Area 4121924
ISTD 564.80>519.95 (-) 1.49e6



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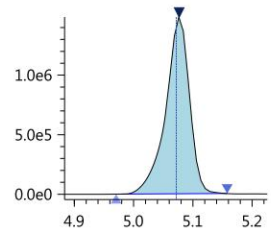
PFUnA-13C
Conc 5.1053
RT 5.077 Area 4121924
Q 564.80>519.95 (-) 1.49e6



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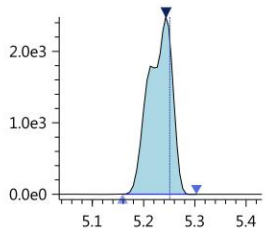
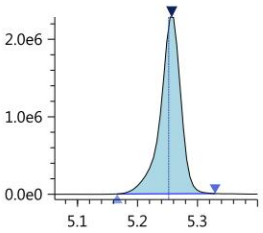
Conc 0.0165
RT 5.244 Area 8069
Q 613.05>569.00 (-) 2.48e3



PFDoA-13C
Conc 4.9083
RT 5.257 Area 5416769
Q 614.80>569.95 (-) 2.29e6



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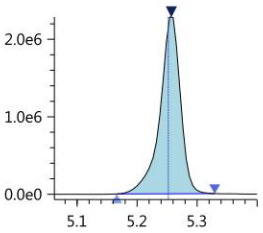
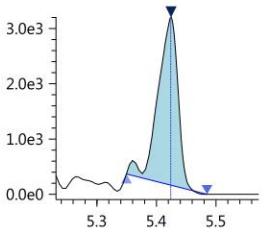
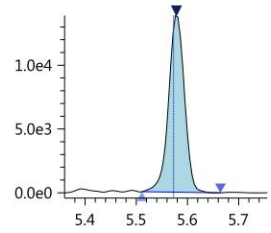
Conc 5.0000
RT 5.257 Area 5416769
ISTD 614.80>569.95 (-) 2.29e6



PFTrDA
Conc 0.0139
RT 5.424 Area 7038
Q 663.00>618.90 (-) 3.21e3



PFTeDA
Conc 0.0194
RT 5.579 Area 29917
Q 713.40>669.00 (-) 1.39e4



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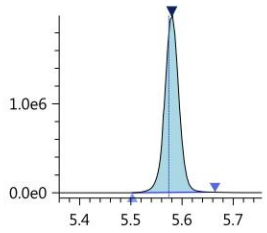
Conc 4.4500
RT 5.580 Area 3868444
Q 714.70>669.90 (-) 1.99e6



PFTeDA-13C_IS
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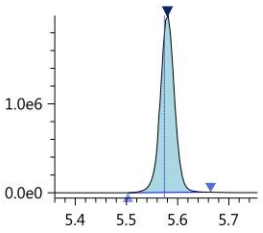
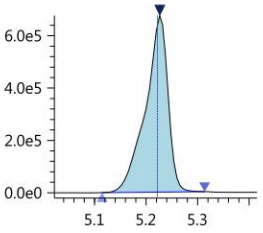
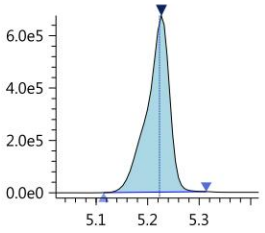
RT 5.580 Area 3868444
ISTD 714.70>669.90 (-) 1.99e6



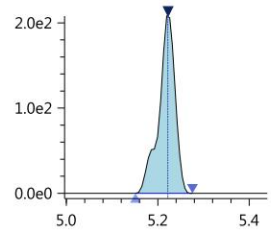
FOSA-13C_IS
Conc 5.0000
RT 5.227 Area 2029681
ISTD 506.00>78.05 (-) 6.77e5



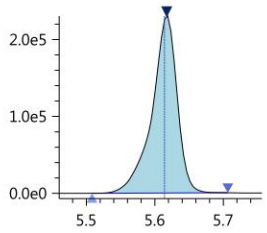
FOSA-13C
Conc 5.8761
RT 5.227 Area 2029681
Q 506.00>78.05 (-) 6.77e5



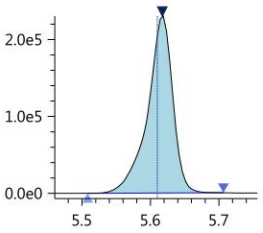
FOSA
Conc 0.0010
RT 5.222 Area 518
Q 498.20>78.00 (-) 2.08e2



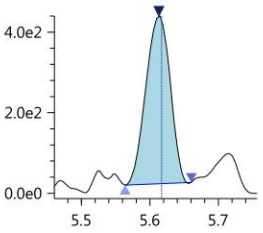
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 586523
ISTD 514.90>168.90 (-) 2.31e5



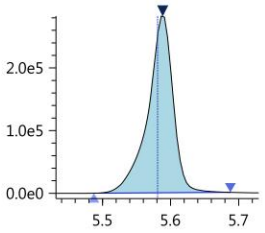
N-MeFOSA-d3
Conc 4.8103
RT 5.617 Area 586523
Q 514.90>168.90 (-) 2.31e5



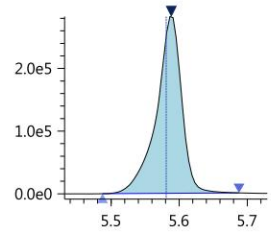
N-MeFOSA
Conc 0.0069
RT 5.613 Area 1032
Q 512.00>169.10 (-) 4.40e2



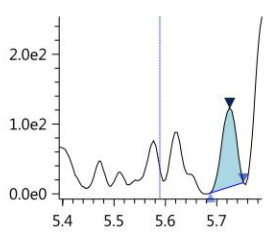
N-MeFOSE-d7
Conc 4.9045
RT 5.588 Area 723520
Q 622.70>59.10 (-) 2.83e5



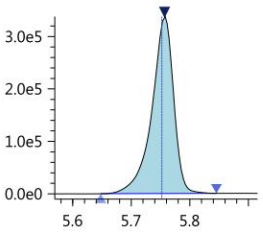
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 723520
ISTD 622.70>59.10 (-) 2.83e5



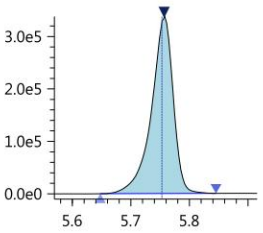
N-MeFOSE
Conc 0.0011
RT 5.725 Area 220
Q 616.00>59.00 (-) 2.54e2



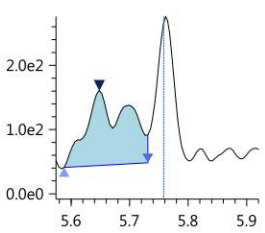
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.757 Area 871048
ISTD 530.90>169.15 (-) 3.38e5



N-EtFOSA-d9
Conc 4.5751
RT 5.757 Area 871048
Q 530.90>169.15 (-) 3.38e5



N-EtFOSA
Conc 0.0206
RT 5.648 Area 573
Q 526.90>169.10 (-) 2.76e2



Insight Report

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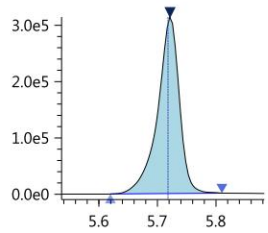
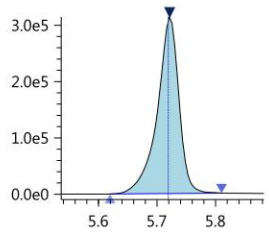
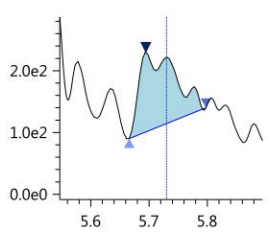
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.722 Area 804807
ISTD 638.70>59.10 (-) 3.15e5



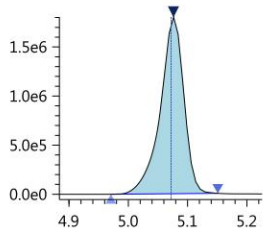
N-EtFOSE-d9
Conc 4.9489
RT 5.722 Area 804807
Q 638.70>59.10 (-) 3.15e5



N-EtFOSE
Conc 0.0032
RT 5.695 Area 528
Q 630.00>58.90 (-) 2.87e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.076 Area 4963451
ISTD 570.00>525.00 (-) 1.81e6



1st CM 01/14/19
2nd 01/15/19

Validation Report

Data File: J:\LCMS06\Data\122018_b3\122018_046
Lab ID: KQ1818586-01
RunType: CCV
Matrix: Soil

Date Acquired: 12/21/18 02:58
Batch ID: 619743
Analysis Method: PFC/537M/PFOA

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Printed: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/14/19
2nd 01/15/19

Quantitation Report

Data File:	J:\LCMS06\Data\122018_b3\122018_046	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 02:58	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818586-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Soil
Prod Code:	PFOA	**Collect Date:**	12/14/18	**Receive Date:**	12/15/18

Analysis Lot:	619743	**Prep Lot:**		**Report Group:**	KQ1818586
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1800576
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.060		4955032	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	3.969		1180787	5.6499	Y
18O2-PFHxS	4.359		714764	5.7113	Y
13C4-PFOS	4.682		673665	5.2884	Y
13C4-PFBA	3.314		3548817	5.7551	Y
13C5-PFPeA	3.914		1818292	5.8848	Y
13C2-PFHxA	4.178		5901779	5.4340	Y
13C4-PFHpA	4.359		4443588	5.6116	Y
13C4-PFOA	4.527		6445428	5.1195	Y
13C5-PFNA	4.695		4076839	4.9655	Y
13C2-PFDA	4.878		3837521	5.0918	Y
13C2-PFUnDA	5.060		4485894	5.2052	Y
13C2-PFDoDA	5.239		6748821	5.4420	Y
13C2-PFTeDA	5.563		5647248	6.1776	Y
13C8-FOSA	5.215		1697564	5.6520	Y
D3-MeFOSAA	4.983		897579	8.7232	Y
D5-EtFOSAA	5.079		981344	9.1829	Y
13C2-6:2 FTS	4.518		462688	2.8949	Y
13C2-8:2 FTS	4.878		330175	3.0631	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.967		178181	0.8514	Y
Perfluorohexane sulfonic acid (PFHxS)	4.358		115197	0.7761	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: 1/14/19 12:50
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st CM 01/14/19
2nd 01/15/19

Data File:	J:\LCMS06\Data\122018_b3\122018_046	**Instrument:**	K-LCMS-06
Acqu Date:	12/21/18 02:58	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1818586-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.519		125408	0.8841	Y
Perfluorooctane sulfonic acid (PFOS)	4.681		83301	0.8787	Y
Perfluorodecane sulfonic acid (PFDS)	5.038		123266	0.8953	Y
Perfluorobutanoic acid (PFBA)	3.315		612706	1.0126	Y
Perfluoropentanoic acid (PFPeA)	3.914		1053421	0.9602	Y
Perfluorohexanoic acid (PFHxA)	4.177		1019074	0.9567	Y
Perfluoroheptanoic acid (PFHpA)	4.358		1185090	0.9850	Y
Perfluorooctanoic acid (PFOA)	4.527		977939	0.9967	Y
Perfluorononanoic acid (PFNA)	4.694		658494	0.9757	Y
Perfluorodecanoic acid (PFDA)	4.878		643798	0.9978	Y
Perfluoroundecanoic acid (PFUnDA)	5.060		645282	0.9293	Y
Perfluorododecanoic acid (PFDoDA)	5.239		773896	1.0486	Y
Perfluorotridecanoic acid (PFTrDA)	5.408		1010214	0.8739	Y
Perfluorotetradecanoic acid (PFTeDA)	5.563		413477	1.0121	Y
Perfluorooctane sulfonamide (FOSA)	5.215		502798	0.9400	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.986		111996	1.1751	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.082		67413	0.8600	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.517		71655	1.0259	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.876		56218	0.9473	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

Insight Report

Printed at 1/14/2019 12:39:49 PM

Batch File: ----
Method File: J:\LCMS06\Data\122018_b3\122018_b3.lcm
Project File: J:\LCMS06\Data\122018_b3\122018_b3.damlp
Flags File: J:\LCMS06\Data\122018_b3\122018_b3.damlp

122018_046

Sample ID: 1.0 PPB CCV
Date acquired: 12/21/2018 2:58:21 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\122018_b3\122018_046.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.314	3548817	3548817	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.314	3548817	4955032	26	5.7551	ng/mL	5.0000
PFBA	M	3.315	612706	3548817	2	1.0126	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.914	1818292	1818292	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.914	1818292	4955032	26	5.8848	ng/mL	5.0000
PFPeA	Auto	3.914	1053421	1818292	4	0.9602	ng/mL	1.0000
PFBS_1	Auto	3.967	178181	1180787	16	0.8514	ng/mL	0.8874
PFBS-13C	Auto	3.969	1180787	4955032	26	5.6499	ng/mL	5.0000
PFBS-13C_IS	Auto	3.969	1180787	1180787	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.178	5901779	5901779	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.178	5901779	4955032	26	5.4340	ng/mL	5.0000
PFHxA	Auto	4.177	1019074	5901779	6	0.9567	ng/mL	1.0000
PFHpA	Auto	4.358	1185090	4443588	8	0.9850	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.359	4443588	4443588	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.359	4443588	4955032	26	5.6116	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.359	714764	714764	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.359	714764	4955032	26	5.7113	ng/mL	5.0000
PFHxS_1	Auto	4.358	115197	714764	7	0.7761	ng/mL	0.9131
6_2-FTS-13C	Auto	4.518	462688	4955032	26	2.8949	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.518	462688	462688	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.517	71655	462688	10	1.0259	ng/mL	0.9512
PFHpS_1	Auto	4.519	125408	714764	7	0.8841	ng/mL	0.9534
PFOA-13C_IS	Auto	4.527	6445428	6445428	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.527	6445428	4955032	26	5.1195	ng/mL	5.0000
PFOA	Auto	4.527	977939	6445428	9	0.9967	ng/mL	1.0000
PFOS_1	Auto	4.681	83301	673665	13	0.8787	ng/mL	0.9292
PFOS-13C_IS	Auto	4.682	673665	673665	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.682	673665	4955032	26	5.2884	ng/mL	5.0000
PFNA-13C_IS	Auto	4.695	4076839	4076839	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.695	4076839	4955032	26	4.9655	ng/mL	5.0000
PFNA	Auto	4.694	658494	4076839	11	0.9757	ng/mL	1.0000
PFDA-13C_IS	Auto	4.878	3837521	3837521	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.878	3837521	4955032	26	5.0918	ng/mL	5.0000
PFDA	Auto	4.878	643798	3837521	12	0.9978	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.878	330175	330175	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.878	330175	4955032	26	3.0631	ng/mL	5.0000
8_2-FTS_1	Auto	4.876	56218	330175	15	0.9473	ng/mL	0.9600
PFDS_1	Auto	5.038	123266	673665	13	0.8953	ng/mL	0.9647
PFUnA	Auto	5.060	645282	4485894	14	0.9293	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.060	4485894	4485894	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.060	4485894	4955032	26	5.2052	ng/mL	5.0000
PFDoA	Auto	5.239	773896	6748821	17	1.0486	ng/mL	1.0000
PFDoA-13C	Auto	5.239	6748821	4955032	26	5.4420	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.239	6748821	6748821	17	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.408	1010214	5647248	22	0.8739	ng/mL	1.0000
PFTeDA	Auto	5.563	413477	5647248	22	1.0121	ng/mL	1.0000
PFTeDA-13C	Auto	5.563	5647248	4955032	26	6.1776	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.563	5647248	5647248	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.215	1697564	1697564	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.215	1697564	4955032	26	5.6520	ng/mL	5.0000
FOSA	Auto	5.215	502798	1697564	18	0.9400	ng/mL	1.0000
N-MeFOSAA	Auto	4.986	111996	897579	19	1.1751	ng/mL	1.0000
N-MeFOSAA-d3	Auto	4.983	897579	4955032	26	8.7232	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.983	897579	897579	19	5.0000	ng/mL	5.0000
N-EtFOSAA	M	5.082	67413	981344	21	0.8600	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.079	981344	981344	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.079	981344	4955032	26	9.1829	ng/mL	5.0000
13C7-PFUnDA_IS	Auto	5.060	4955032	4955032	26	5.0000	ng/mL	5.0000

Insight Report

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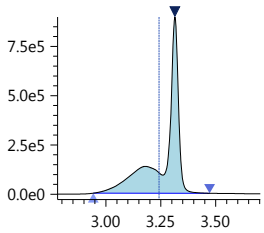
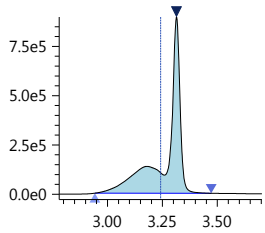
PFBA-13C_IS
Conc 5.0000
RT 3.314 Area 3548817
ISTD 216.90>172.15 (-) 8.99e5

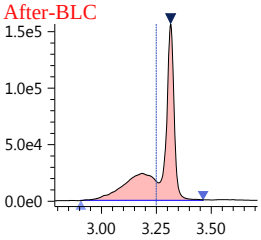


PFBA-13C
Conc 5.7551
RT 3.314 Area 3548817
Q 216.90>172.15 (-) 8.99e5

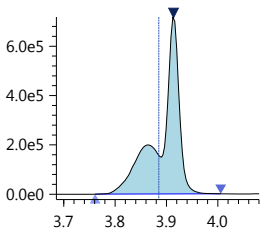


PFBA
Conc 1.0126
RT 3.315 Area 612706
Q 213.00>169.10 (-) 1.57e5

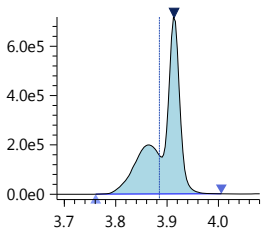
After-BLC



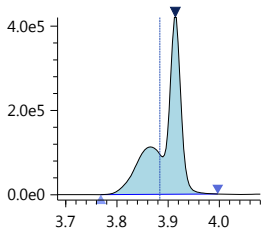
PFPeA-13C_IS
Conc 5.0000
RT 3.914 Area 1818292
ISTD 267.90>223.00 (-) 7.19e5



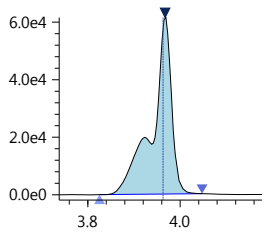
PFPeA-13C
Conc 5.8848
RT 3.914 Area 1818292
Q 267.90>223.00 (-) 7.19e5



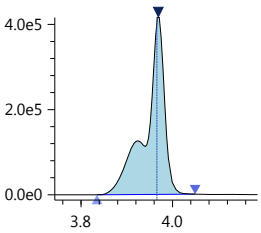
PFPeA
Conc 0.9602
RT 3.914 Area 1053421
Q 263.05>219.10 (-) 4.20e5



PFBS_1
Conc 0.8514
RT 3.967 Area 178181
Q 299.00>80.00 (-) 6.16e4



PFBS-13C
Conc 5.6499
RT 3.969 Area 1180787
Q 301.80>80.00 (-) 4.16e5



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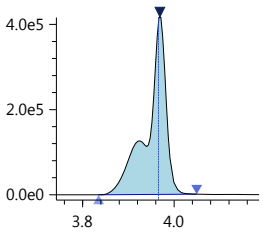
RT 3.969 Area 1180787
ISTD 301.80>80.00 (-) 4.16e5



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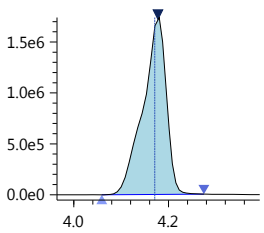
Conc 5.0000
RT 4.178 Area 5901779
ISTD 314.90>270.10 (-) 1.74e6



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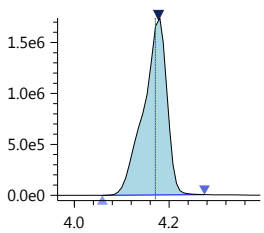
Q 314.90>270.10 (-) 1.74e6



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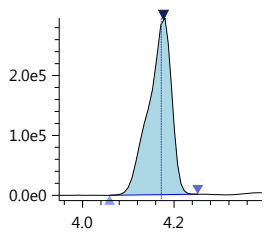
Conc 0.9567
RT 4.177 Area 1019074
Q 313.00>269.00 (-) 2.96e5



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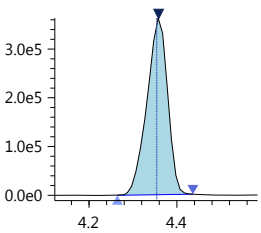
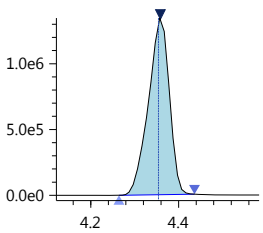
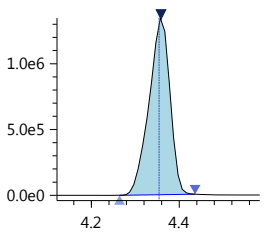
Conc 0.9850
RT 4.358 Area 1185090
Q 362.90>319.00 (-) 3.64e5



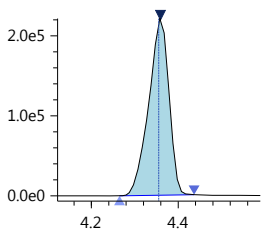
PFHpA-13C_IS
Conc 5.0000
RT 4.359 Area 4443588
ISTD 366.90>322.10 (-) 1.35e6



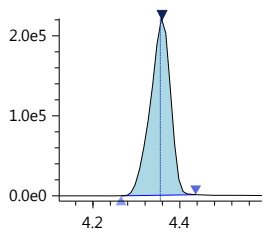
PFHpA-13C
Conc 5.6116
RT 4.359 Area 4443588
Q 366.90>322.10 (-) 1.35e6



PFHxS-18O_IS
Conc 5.0000
RT 4.359 Area 714764
ISTD 402.70>84.05 (-) 2.22e5



PFHxS-18O
Conc 5.7113
RT 4.359 Area 714764
Q 402.70>84.05 (-) 2.22e5



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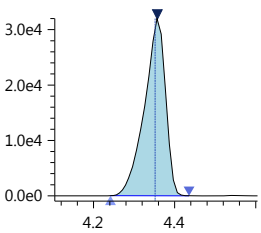
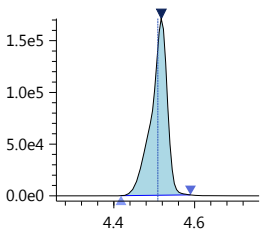
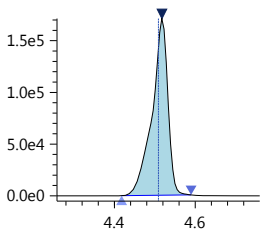
Conc 0.7761
RT 4.358 Area 115197
Q 399.00>80.00 (-) 3.20e4



6_2-FTS-13C
Conc 2.8949
RT 4.518 Area 462688
Q 428.90>409.00 (-) 1.71e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.518 Area 462688
ISTD 428.90>409.00 (-) 1.71e5



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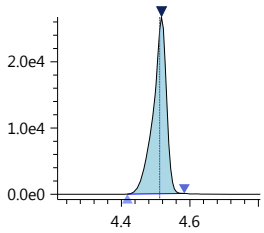
6_2-FTS_1
Conc 1.0259
RT 4.517 Area 71655
Q 427.00>407.00 (-) 2.68e4



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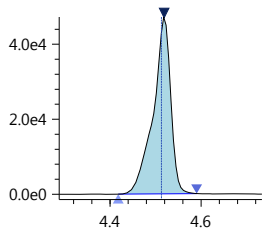
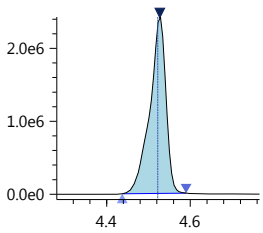
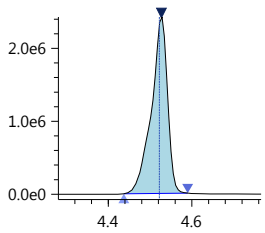
Conc 0.8841
RT 4.519 Area 125408
Q 449.00>80.15 (-) 4.73e4



PFOA-13C_IS
Conc 5.0000
RT 4.527 Area 6445428
ISTD 416.80>372.05 (-) 2.43e6



PFOA-13C
Conc 5.1195
RT 4.527 Area 6445428
Q 416.80>372.05 (-) 2.43e6



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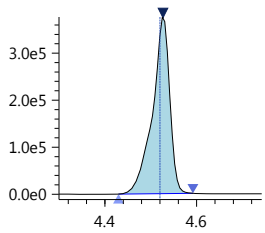
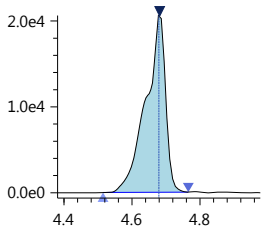
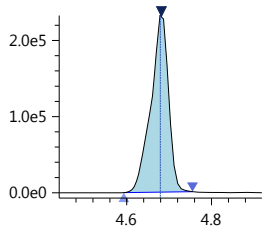
RT 4.527 Area 977939
Q 413.00>369.00 (-) 3.77e5



PFOS_1
Conc 0.8787
RT 4.681 Area 83301
Q 499.00>80.00 (-) 2.06e4



PFOS-13C_IS
Conc 5.0000
RT 4.682 Area 673665
ISTD 502.80>80.05 (-) 2.33e5



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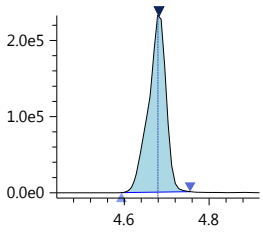
RT 4.682 Area 673665
Q 502.80>80.05 (-) 2.33e5



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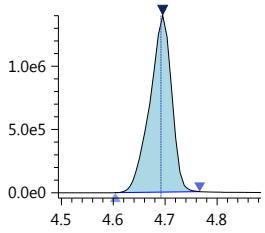
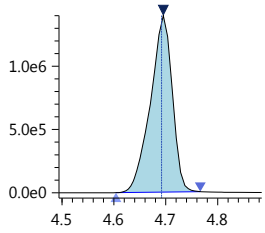
Conc 5.0000
RT 4.695 Area 4076839
ISTD 467.80>423.00 (-) 1.40e6



PFNA-13C
Conc 4.9655
RT 4.695 Area 4076839
Q 467.80>423.00 (-) 1.40e6



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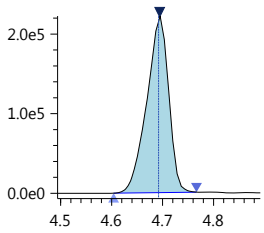
Conc 0.9757
RT 4.694 Area 658494
Q 463.00>418.90 (-) 2.23e5



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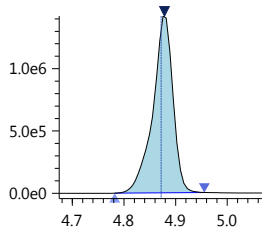
Conc 5.0000
RT 4.878 Area 3837521
ISTD 514.80>469.95 (-) 1.42e6



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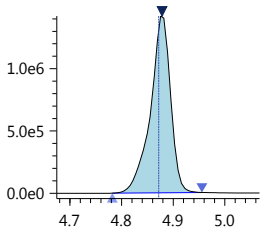
RT 4.878 Area 3837521
Q 514.80>469.95 (-) 1.42e6



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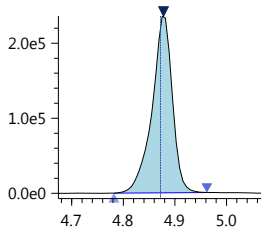
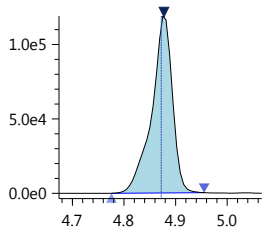
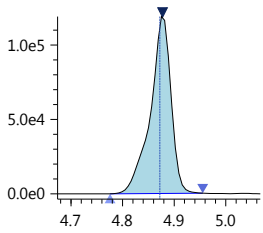
Conc 0.9978
RT 4.878 Area 643798
Q 513.00>468.80 (-) 2.36e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.878 Area 330175
ISTD 528.80>509.00 (-) 1.19e5



8_2-FTS-13C
Conc 3.0631
RT 4.878 Area 330175
Q 528.80>509.00 (-) 1.19e5



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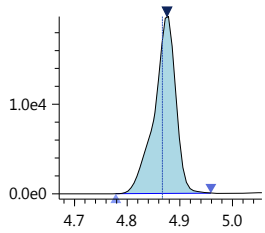
Conc 0.9473
RT 4.876 Area 56218
Q 527.10>506.90 (-) 1.98e4



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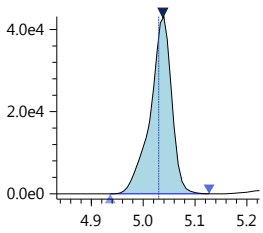
Q 599.00>79.90 (-) 4.32e4



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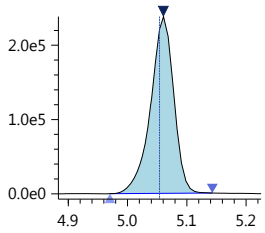
Conc 0.9293
RT 5.060 Area 645282
Q 563.00>518.90 (-) 2.39e5



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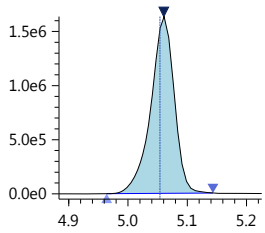
Conc 5.0000
RT 5.060 Area 4485894
ISTD 564.80>519.95 (-) 1.64e6



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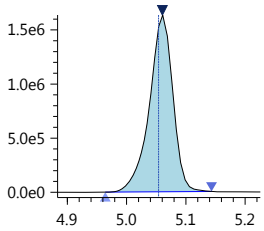
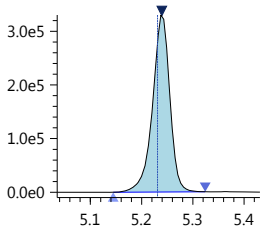
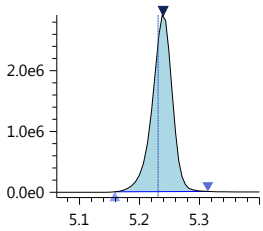
PFUnA-13C
Conc 5.2052
RT 5.060 Area 4485894
Q 564.80>519.95 (-) 1.64e6



PFDoA
Conc 1.0486
RT 5.239 Area 773896
Q 613.05>569.00 (-) 3.30e5



PFDoA-13C
Conc 5.4420
RT 5.239 Area 6748821
Q 614.80>569.95 (-) 2.92e6



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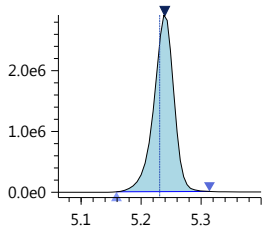
ISTD 614.80>569.95 (-) 2.92e6



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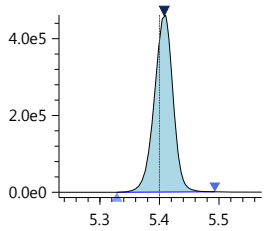
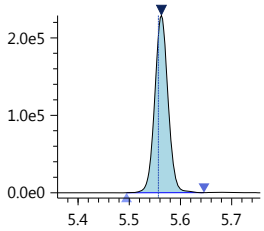
Conc 0.8739
RT 5.408 Area 1010214
Q 663.00>618.90 (-) 4.62e5



PFTeDA
Conc 1.0121
RT 5.563 Area 413477
Q 713.40>669.00 (-) 2.29e5



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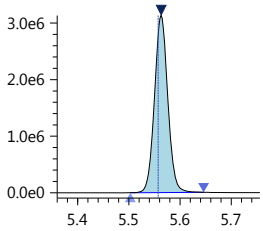
Conc 6.1776
RT 5.563 Area 5647248
Q 714.70>669.90 (-) 3.13e6



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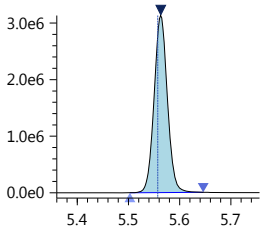
RT 5.563 Area 5647248
ISTD 714.70>669.90 (-) 3.13e6



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RT 5.215 Area 1697564
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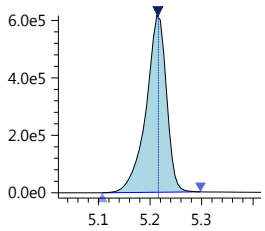

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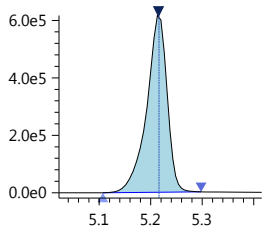
Conc 5.6520
RT 5.215 Area 1697564
Q 506.00>78.05 (-) 6.17e5



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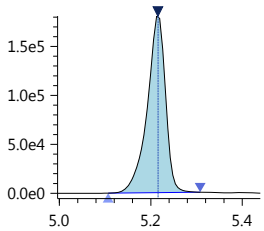
RT 5.215 Area 502798
Q 498.20>78.00 (-) 1.81e5



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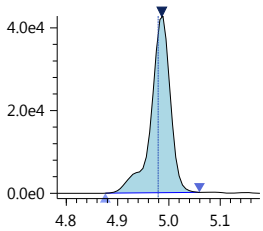
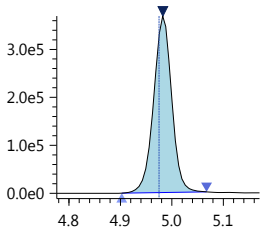
RT 4.986 Area 111996
Q 570.20>419.00 (-) 4.29e4



N-MeFOSAA-d3
Conc 8.7232
RT 4.983 Area 897579
Q 572.80>419.05 (-) 3.70e5



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RT 4.983 Area 897579
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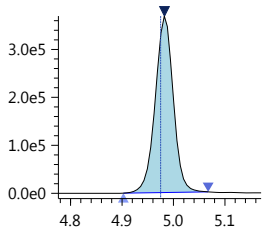

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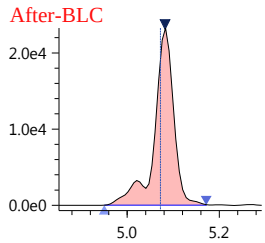
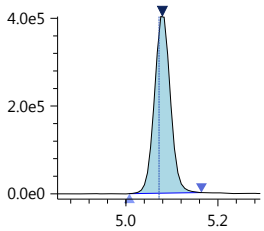
RT 5.082 Area 67413
Q 584.20>418.95 (-) 2.33e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.079 Area 981344
ISTD 588.80>419.00 (-) 4.04e5



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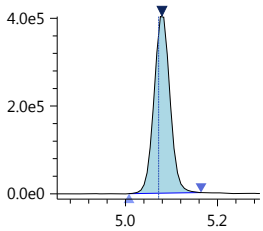
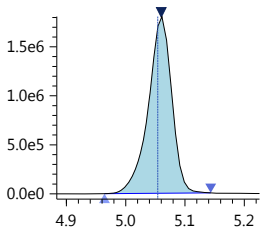


13C7-PFUnDA_IS
Conc 5.0000
RT 5.060 Area 4955032
ISTD 570.00>525.00 (-) 1.81e6



Insight Report

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Flags File: J:\LCMS06\Data\122018_b3\122018_b3.damlp

122018_046

Sample ID: 1.0 PPB CCV
Date acquired: 12/21/2018 2:58:21 AM
Acquired by: System Administrator
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Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

PFBA-13C_IS
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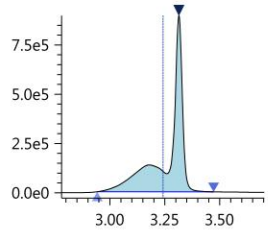
ISTD 216.90>172.15 (-) 8.99e5



PFBA-13C
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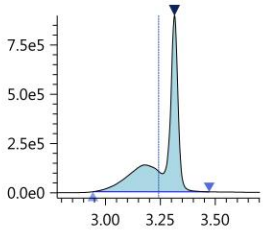

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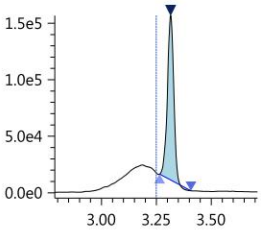
RT 3.315 Area 290750
Q 213.00>169.10 (-) 1.57e5



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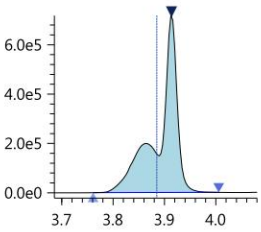
RT 3.914 Area 1818292
ISTD 267.90>223.00 (-) 7.19e5



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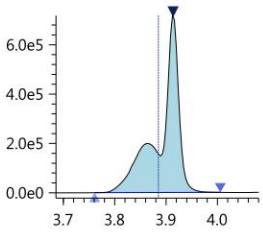

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Conc 0.9602
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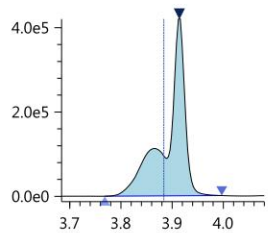

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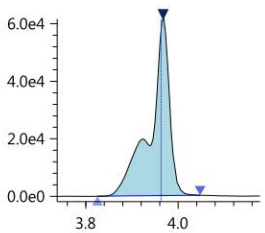
Q 299.00>80.00 (-) 6.16e4



PFBS-13C
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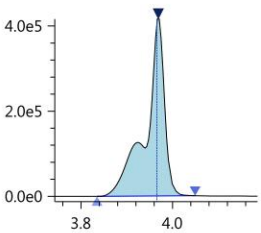
Q 301.80>80.00 (-) 4.16e5



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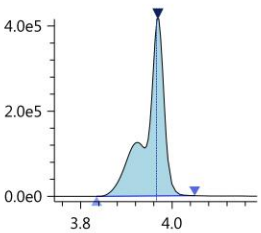

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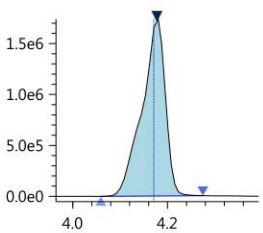

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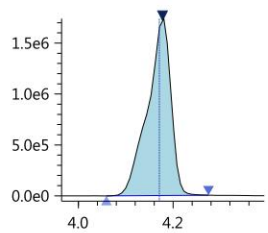
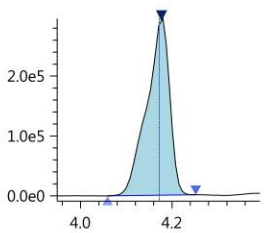
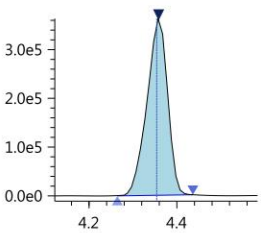


PFHxA
Conc 0.9567
RT 4.177 Area 1019074
Q 313.00>269.00 (-) 2.96e5



PFHpA
Conc 0.9850
RT 4.358 Area 1185090
Q 362.90>319.00 (-) 3.64e5



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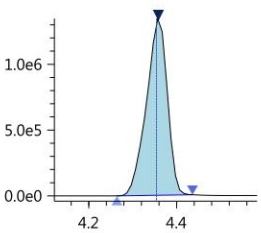
ISTD 366.90>322.10 (-) 1.35e6



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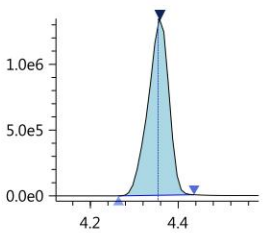

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PFHxS-18O_IS
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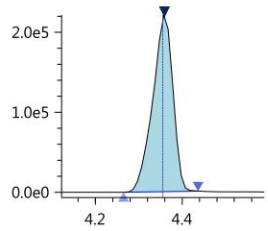
ISTD 402.70>84.05 (-) 2.22e5



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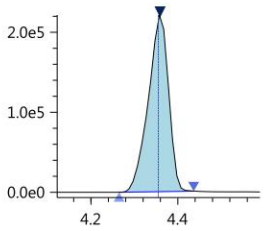
Q 402.70>84.05 (-) 2.22e5



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Conc 0.7761
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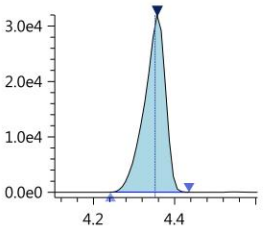
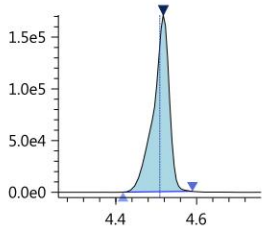


6_2-FTS-13C
Conc 2.8949
RT 4.518 Area 462688
Q 428.90>409.00 (-) 1.71e5



6_2-FTS-13C_IS
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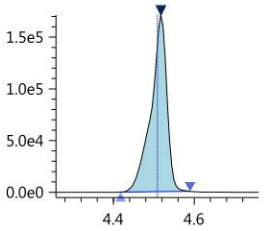
ISTD 428.90>409.00 (-) 1.71e5



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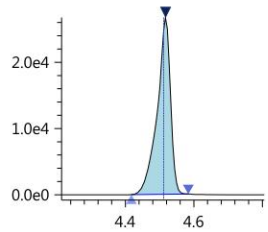
Conc 1.0259
RT 4.517 Area 71655
Q 427.00>407.00 (-) 2.68e4



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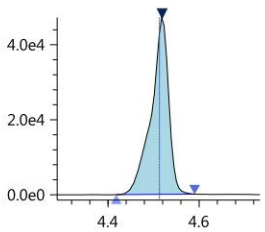

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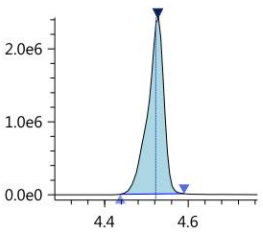
ISTD 416.80>372.05 (-) 2.43e6



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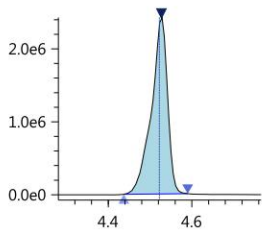
RT 4.527 Area 6445428
Q 416.80>372.05 (-) 2.43e6



PFOA
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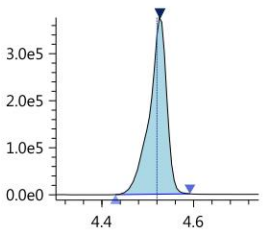
RT 4.527 Area 977939
Q 413.00>369.00 (-) 3.77e5



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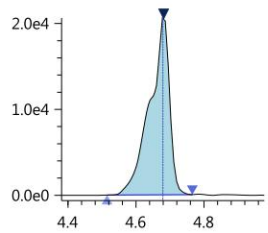
Q 499.00>80.00 (-) 2.06e4



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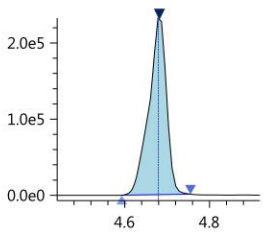

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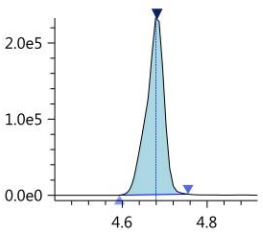

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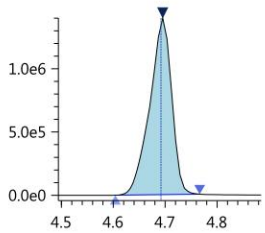
Conc 5.0000
RT 4.695 Area 4076839
ISTD 467.80>423.00 (-) 1.40e6



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Conc 4.9655
RT 4.695 Area 4076839
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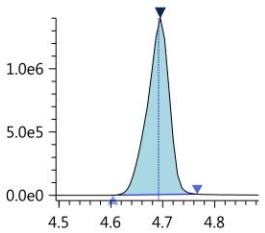

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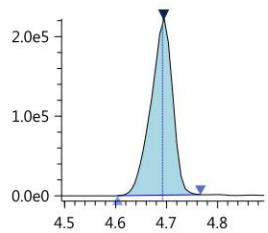
RT 4.694 Area 658494
Q 463.00>418.90 (-) 2.23e5



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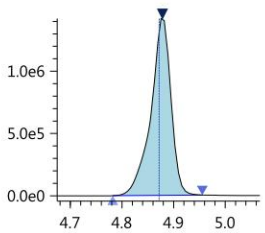

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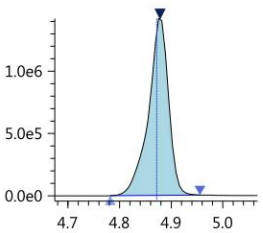

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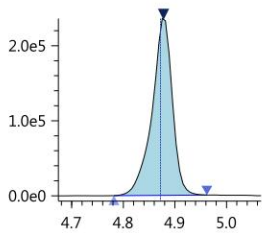
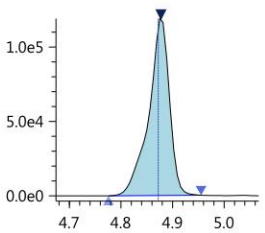


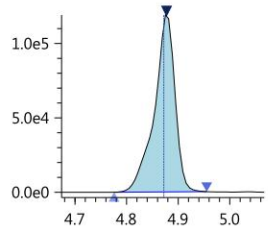
8_2-FTS-13C_IS
Conc 5.0000
RT 4.878 Area 330175
ISTD 528.80>509.00 (-) 1.19e5



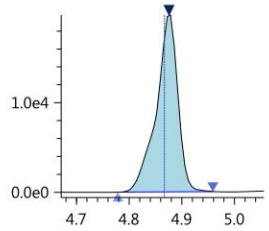
Insight Report

Printed at 1/14/2019 11:23:27 AM

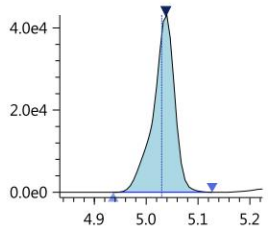
8_2-FTS-13C
Conc 3.0631
RT 4.878 Area 330175
Q 528.80>509.00 (-) 1.19e5



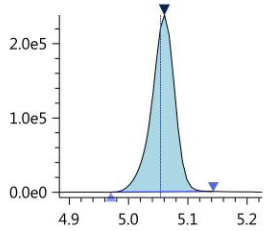
8_2-FTS_1
Conc 0.9473
RT 4.876 Area 56218
Q 527.10>506.90 (-) 1.98e4



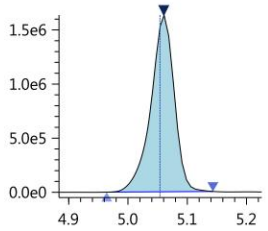
PFDS_1
Conc 0.8953
RT 5.038 Area 123266
Q 599.00>79.90 (-) 4.32e4



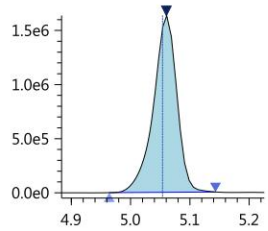
PFUnA
Conc 0.9293
RT 5.060 Area 645282
Q 563.00>518.90 (-) 2.39e5



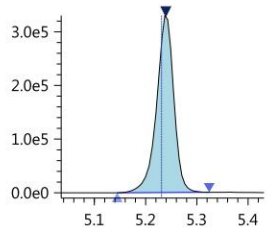
PFUnA-13C_IS
Conc 5.0000
RT 5.060 Area 4485894
ISTD 564.80>519.95 (-) 1.64e6



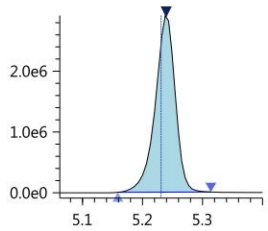
PFUnA-13C
Conc 5.2052
RT 5.060 Area 4485894
Q 564.80>519.95 (-) 1.64e6



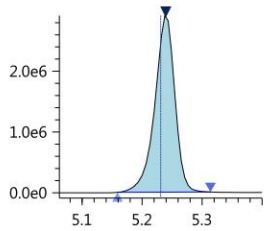
PFDoA
Conc 1.0486
RT 5.239 Area 773896
Q 613.05>569.00 (-) 3.30e5



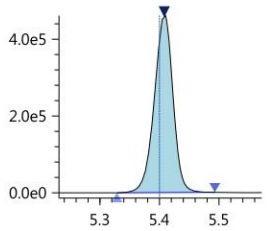
PFDoA-13C
Conc 5.4420
RT 5.239 Area 6748821
Q 614.80>569.95 (-) 2.92e6



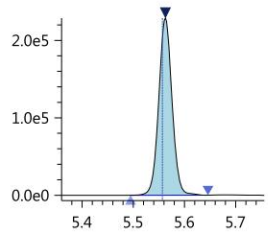
PFDoA-13C_IS
Conc 5.0000
RT 5.239 Area 6748821
ISTD 614.80>569.95 (-) 2.92e6



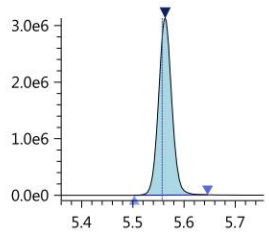
PFTrDA
Conc 0.8739
RT 5.408 Area 1010214
Q 663.00>618.90 (-) 4.62e5



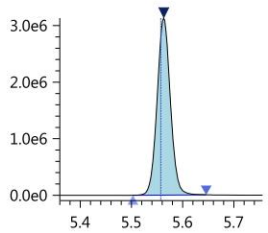
PFTeDA
Conc 1.0121
RT 5.563 Area 413477
Q 713.40>669.00 (-) 2.29e5



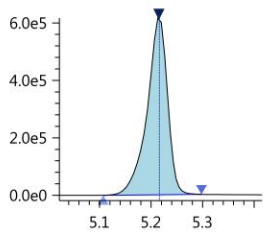
PFTeDA-13C
Conc 6.1776
RT 5.563 Area 5647248
Q 714.70>669.90 (-) 3.13e6



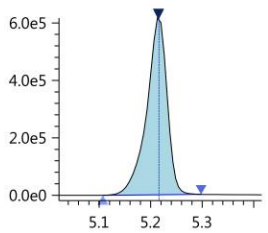
PFTeDA-13C_IS
Conc 5.0000
RT 5.563 Area 5647248
ISTD 714.70>669.90 (-) 3.13e6



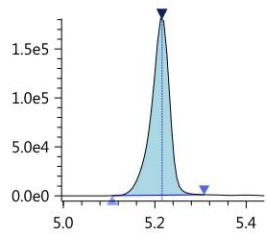
FOSA-13C_IS
Conc 5.0000
RT 5.215 Area 1697564
ISTD 506.00>78.05 (-) 6.17e5



FOSA-13C
Conc 5.6520
RT 5.215 Area 1697564
Q 506.00>78.05 (-) 6.17e5



FOSA
Conc 0.9400
RT 5.215 Area 502798
Q 498.20>78.00 (-) 1.81e5



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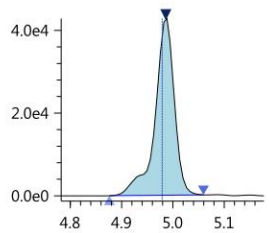
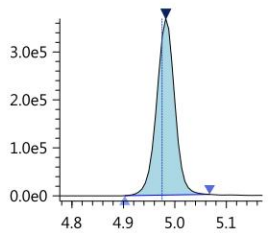
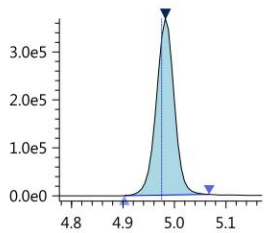
Conc 1.1751
RT 4.986 Area 111996
Q 570.20>419.00 (-) 4.29e4



N-MeFOSAA-d3
Conc 8.7232
RT 4.983 Area 897579
Q 572.80>419.05 (-) 3.70e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.983 Area 897579
ISTD 572.80>419.05 (-) 3.70e5



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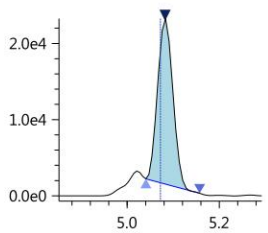
Conc 0.6405
RT 5.082 Area 50210
Q 584.20>418.95 (-) 2.33e4

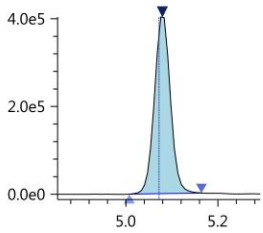


Insight Report

Printed at 1/14/2019 11:23:27 AM

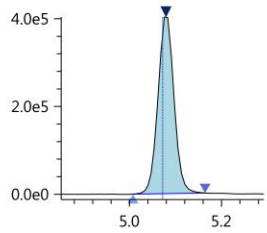
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.079 Area 981344
ISTD 588.80>419.00 (-) 4.04e5



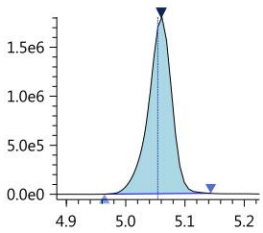
N-EtFOSAA-d5

Conc 9.1829
RT 5.079 Area 981344
Q 588.80>419.00 (-) 4.04e5



13C7-PFUnDA_IS

Conc 5.0000
RT 5.060 Area 4955032
ISTD 570.00>525.00 (-) 1.81e6



1st CM 01/18/19
2nd 01/21/19

Validation Report

Data File: J:\LCMS06\Data\190104_b5\010419_119
Lab ID: KQ1900180-01
RunType: CCV
Matrix: Water

Date Acquired: 1/5/19 11:03
Batch ID: 621097
Analysis Method: PFC/537M/PFOA

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Printed: 1/18/19 10:55
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/18/19
2nd 01/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190104_b5\010419_119	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:03	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900180-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	12/13/18	**Receive Date:**	12/13/18

Analysis Lot:	621097	**Prep Lot:**		**Report Group:**	KQ1900180
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900007
		Report List ID:	20001

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.073		4302081	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	3.978		830884	4.8261	Y
18O2-PFHxS	4.368		627888	5.2863	Y
13C4-PFOS	4.692		618740	4.9912	Y
13C4-PFBA	3.323		2540873	4.6028	Y
13C5-PFPeA	3.922		1472988	4.7883	Y
13C2-PFHxA	4.188		4865837	4.7368	Y
13C4-PFHpA	4.369		3869041	5.0209	Y
13C4-PFOA	4.537		4305191	4.1913	Y
13C5-PFNA	4.706		4187329	4.8994	Y
13C2-PFDA	4.891		3767244	5.0492	Y
13C2-PFUnDA	5.073		3363130	4.8175	Y
13C2-PFDoDA	5.253		4712403	4.6522	Y
13C2-PFTeDA	5.576		3664083	5.0553	Y
13C8-FOSA	5.228		1542379	4.6761	Y
D3-MeFOSA	5.619		501154	5.3393	Y
D5-EtFOSA	5.758		798996	5.0767	Y
D7-MeFOSE	5.590		638971	4.6863	Y
D9-EtFOSE	5.723		734157	4.9891	Y
D3-MeFOSAA	4.995		611428	4.6837	Y
D5-EtFOSAA	5.093		626343	4.9976	Y
13C2-6:2 FTS	4.527		382528	3.5796	Y
13C2-8:2 FTS	4.889		346101	4.1646	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: 1/18/19 10:55
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Data File:	J:\LCMS06\Data\190104_b5\010419_119	**Instrument:**	K-LCMS-06
Acqu Date:	1/5/19 11:03	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900180-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.976		154826	0.9147	Y
Perfluorohexane sulfonic acid (PFHxS)	4.368		92716	0.7664	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.529		117782	0.9306	Y
Perfluorooctane sulfonic acid (PFOS)	4.691		74975	0.8216	Y
Perfluorodecane sulfonic acid (PFDS)	5.050		99406	0.8738	Y
Perfluorobutanoic acid (PFBA)	3.324		459049	1.0243	Y
Perfluoropentanoic acid (PFPeA)	3.922		744919	0.9532	Y
Perfluorohexanoic acid (PFHxA)	4.187		816628	0.9499	Y
Perfluoroheptanoic acid (PFHpA)	4.368		670576	0.8109	Y
Perfluorooctanoic acid (PFOA)	4.537		769477	1.0895	Y
Perfluorononanoic acid (PFNA)	4.707		533080	0.9586	Y
Perfluorodecanoic acid (PFDA)	4.891		580043	0.9196	Y
Perfluoroundecanoic acid (PFUnDA)	5.073		521750	0.9598	Y
Perfluorododecanoic acid (PFDoDA)	5.252		508660	0.9953	Y
Perfluorotridecanoic acid (PFTrDA)	5.424		632550	0.9610	Y
Perfluorotetradecanoic acid (PFTeDA)	5.576		258986	1.0388	Y
Perfluorooctane sulfonamide (FOSA)	5.228		381957	0.9269	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.622		125623	0.9493	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.763		27088	0.9565	Y
N-Methyl perfluorooctane sulfonamidoethanol	5.598		175715	0.9465	Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.734		154003	0.8625	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.998		70498	1.0999	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.098		56663	1.0096	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.527		76346	1.0801	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.888		55401	0.9081	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

Insight Report

Printed at 1/18/2019 10:42:01 AM

Batch File: ----
Method File: J:\LCMS06\Data\190104_b5\190104_b5.lcm
Project File: J:\LCMS06\Data\190104_b5\190104_b5.damlp
Flags File: J:\LCMS06\Data\190104_b5\190104_b5.damlp

010419_119

Sample ID: 1.0 PPB CCV
Date acquired: 1/5/2019 11:03:32 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104_b5\010419_119.lcd
Vial: 14 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.323	2540873	2540873	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.323	2540873	4302081	26	4.6028	ng/mL	5.0000
PFBA	M	3.324	459049	2540873	2	1.0243	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.922	1472988	1472988	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.922	1472988	4302081	26	4.7883	ng/mL	5.0000
PFPeA	Auto	3.922	744919	1472988	4	0.9532	ng/mL	1.0000
PFBS_1	Auto	3.976	154826	830884	16	0.9147	ng/mL	0.8874
PFBS-13C	Auto	3.978	830884	4302081	26	4.8261	ng/mL	5.0000
PFBS-13C_IS	Auto	3.978	830884	830884	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.188	4865837	4865837	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.188	4865837	4302081	26	4.7368	ng/mL	5.0000
PFHxA	Auto	4.187	816628	4865837	6	0.9499	ng/mL	1.0000
PFHpA	Auto	4.368	670576	3869041	8	0.8109	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.369	3869041	3869041	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.369	3869041	4302081	26	5.0209	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.368	627888	627888	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.368	627888	4302081	26	5.2863	ng/mL	5.0000
PFHxS_1	Auto	4.368	92716	627888	7	0.7664	ng/mL	0.9131
6_2-FTS-13C	Auto	4.527	382528	4302081	26	3.5796	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.527	382528	382528	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.527	76346	382528	10	1.0801	ng/mL	0.9512
PFHpS_1	Auto	4.529	117782	627888	7	0.9306	ng/mL	0.9534
PFOA-13C_IS	Auto	4.537	4305191	4305191	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.537	4305191	4302081	26	4.1913	ng/mL	5.0000
PFOA	Auto	4.537	769477	4305191	9	1.0895	ng/mL	1.0000
PFOS_1	Auto	4.691	74975	618740	13	0.8216	ng/mL	0.9292
PFOS-13C_IS	Auto	4.692	618740	618740	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.692	618740	4302081	26	4.9912	ng/mL	5.0000
PFNA-13C_IS	Auto	4.706	4187329	4187329	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.706	4187329	4302081	26	4.8994	ng/mL	5.0000
PFNA	Auto	4.707	533080	4187329	11	0.9586	ng/mL	1.0000
PFDA-13C_IS	Auto	4.891	3767244	3767244	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.891	3767244	4302081	26	5.0492	ng/mL	5.0000
PFDA	Auto	4.891	580043	3767244	12	0.9196	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.889	346101	346101	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.889	346101	4302081	26	4.1646	ng/mL	5.0000
8_2-FTS_1	Auto	4.888	55401	346101	15	0.9081	ng/mL	0.9600
PFDS_1	Auto	5.050	99406	618740	13	0.8738	ng/mL	0.9647
PFUnA	Auto	5.073	521750	3363130	14	0.9598	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.073	3363130	3363130	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.073	3363130	4302081	26	4.8175	ng/mL	5.0000
PFDoA	Auto	5.252	508660	4712403	17	0.9953	ng/mL	1.0000
PFDoA-13C	Auto	5.253	4712403	4302081	26	4.6522	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.253	4712403	4712403	17	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.424	632550	3664083	22	0.9610	ng/mL	1.0000
PFTeDA	Auto	5.576	258986	3664083	22	1.0388	ng/mL	1.0000
PFTeDA-13C	Auto	5.576	3664083	4302081	26	5.0553	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.576	3664083	3664083	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.228	1542379	1542379	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.228	1542379	4302081	26	4.6761	ng/mL	5.0000
FOSA	Auto	5.228	381957	1542379	18	0.9269	ng/mL	1.0000
N-MeFOSAA	M	4.998	70498	611428	19	1.0999	ng/mL	1.0000
N-MeFOSAA-d3	Auto	4.995	611428	4302081	26	4.6837	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.995	611428	611428	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.619	501154	501154	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.619	501154	4302081	26	5.3393	ng/mL	5.0000
N-MeFOSA	Auto	5.622	125623	501154	1	0.9493	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.590	638971	4302081	26	4.6863	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.590	638971	638971	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.598	175715	638971	20	0.9465	ng/mL	1.0000
N-EtFOSAA	Auto	5.098	56663	626343	21	1.0096	ng/mL	1.0000

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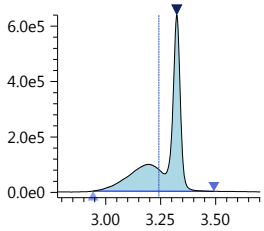
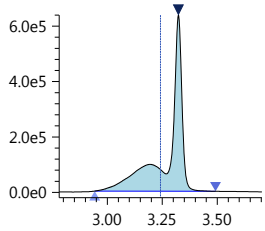
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA-d5_IS	Auto	5.093	626343	626343	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.093	626343	4302081	26	4.9976	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.758	798996	798996	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.758	798996	4302081	26	5.0767	ng/mL	5.0000
N-EtFOSA	Auto	5.763	27088	798996	23	0.9565	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.723	734157	734157	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.723	734157	4302081	26	4.9891	ng/mL	5.0000
N-EtFOSE	Auto	5.734	154003	734157	24	0.8625	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.073	4302081	4302081	26	5.0000	ng/mL	5.0000

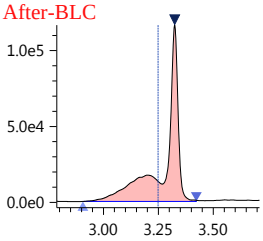
PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2540873
ISTD 216.90>172.15 (-) 6.40e5



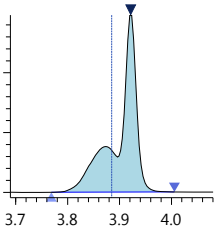
PFBA-13C
Conc 4.6028
RT 3.323 Area 2540873
Q 216.90>172.15 (-) 6.40e5



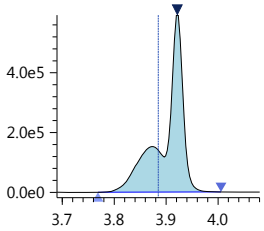
PFBA
Conc 1.0243
RT 3.324 Area 459049
Q 213.00>169.10 (-) 1.17e5
After-BLC



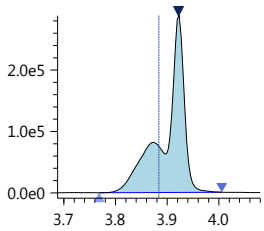
PFPeA-13C_IS
Conc 5.0000
RT 3.922 Area 1472988
ISTD 267.90>223.00 (-) 5.93e5



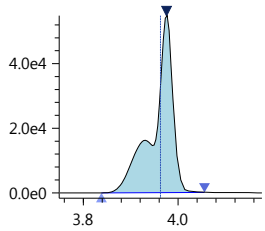
PFPeA-13C
Conc 4.7883
RT 3.922 Area 1472988
Q 267.90>223.00 (-) 5.93e5



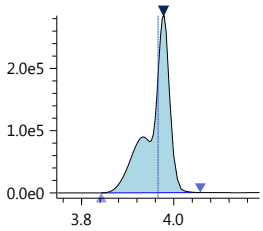
PFPeA
Conc 0.9532
RT 3.922 Area 744919
Q 263.05>219.10 (-) 2.89e5



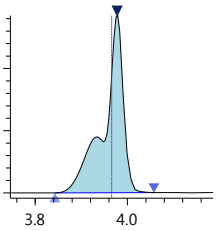
PFBS_1
Conc 0.9147
RT 3.976 Area 154826
Q 299.00>80.00 (-) 5.49e4



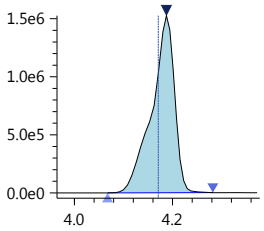
PFBS-13C
Conc 4.8261
RT 3.978 Area 830884
Q 301.80>80.00 (-) 2.85e5



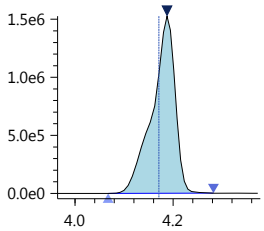
PFBS-13C_IS
Conc 5.0000
RT 3.978 Area 830884
ISTD 301.80>80.00 (-) 2.85e5



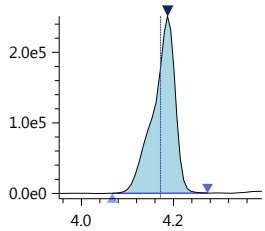
PFHxA-13C_IS
Conc 5.0000
RT 4.188 Area 4865837
ISTD 314.90>270.10 (-) 1.53e6



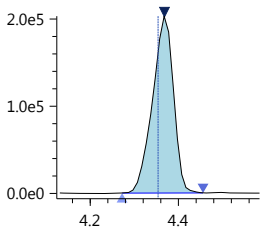
PFHxA-13C
Conc 4.7368
RT 4.188 Area 4865837
Q 314.90>270.10 (-) 1.53e6



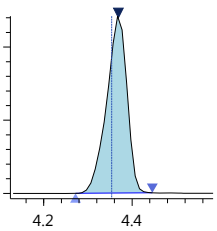
PFHxA
Conc 0.9499
RT 4.187 Area 816628
Q 313.00>269.00 (-) 2.51e5



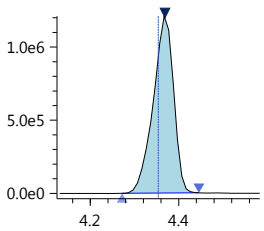
PFHpA
Conc 0.8109
RT 4.368 Area 670576
Q 362.90>319.00 (-) 2.03e5



PFHpA-13C_IS
Conc 5.0000
RT 4.369 Area 3869041
ISTD 366.90>322.10 (-) 1.21e6



PFHpA-13C
Conc 5.0209
RT 4.369 Area 3869041
Q 366.90>322.10 (-) 1.21e6



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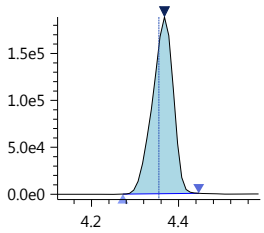
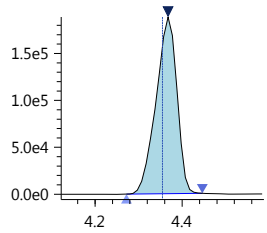
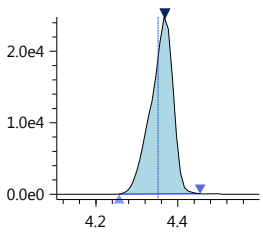
PFHxS-18O_IS
Conc 5.0000
RT 4.368 Area 627888
ISTD 402.70>84.05 (-) 1.89e5



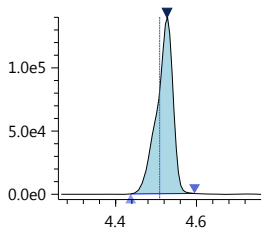
PFHxS-18O
Conc 5.2863
RT 4.368 Area 627888
Q 402.70>84.05 (-) 1.89e5



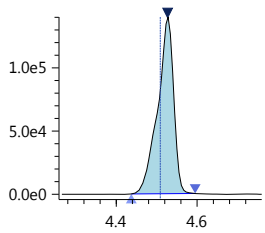
PFHxS_1
Conc 0.7664
RT 4.368 Area 92716
Q 399.00>80.00 (-) 2.48e4



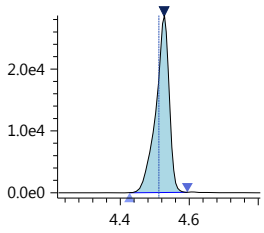
6_2-FTS-13C
Conc 3.5796
RT 4.527 Area 382528
Q 428.90>409.00 (-) 1.40e5



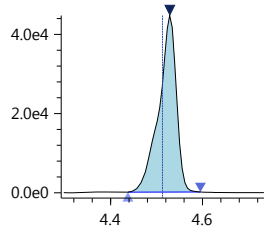
6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 382528
ISTD 428.90>409.00 (-) 1.40e5



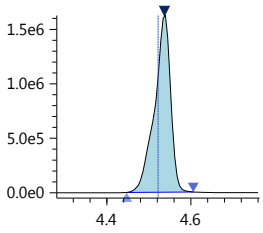
6_2-FTS_1
Conc 1.0801
RT 4.527 Area 76346
Q 427.00>407.00 (-) 2.87e4



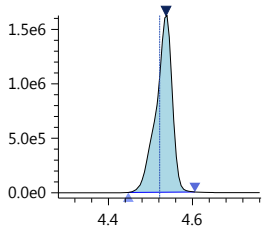
PFHpS_1
Conc 0.9306
RT 4.529 Area 117782
Q 449.00>80.15 (-) 4.48e4



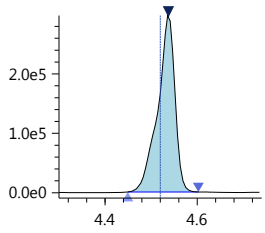
PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 4305191
ISTD 416.80>372.05 (-) 1.63e6



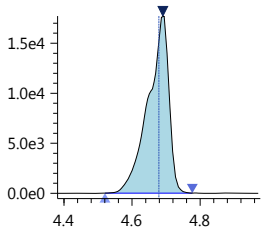
PFOA-13C
Conc 4.1913
RT 4.537 Area 4305191
Q 416.80>372.05 (-) 1.63e6



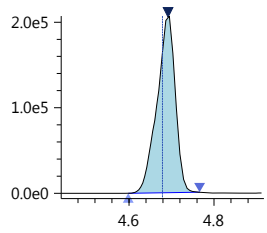
PFOA
Conc 1.0895
RT 4.537 Area 769477
Q 413.00>369.00 (-) 2.98e5



PFOS_1
Conc 0.8216
RT 4.691 Area 74975
Q 499.00>80.00 (-) 1.77e4



PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 618740
ISTD 502.80>80.05 (-) 2.07e5



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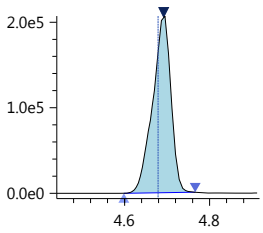
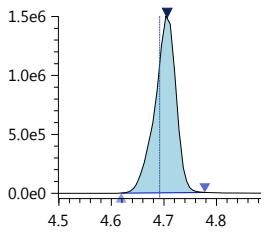
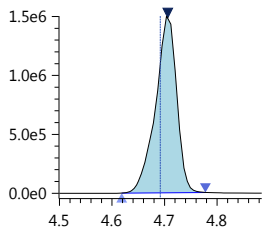
Conc 4.9912
RT 4.692 Area 618740
Q 502.80>80.05 (-) 2.07e5



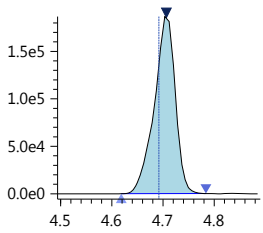
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4187329
ISTD 467.80>423.00 (-) 1.50e6



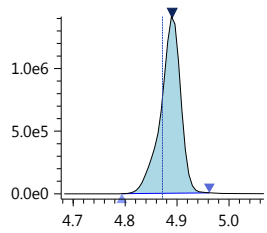
PFNA-13C
Conc 4.8994
RT 4.706 Area 4187329
Q 467.80>423.00 (-) 1.50e6



PFNA
Conc 0.9586
RT 4.707 Area 533080
Q 463.00>418.90 (-) 1.87e5



PFDA-13C_IS
Conc 5.0000
RT 4.891 Area 3767244
ISTD 514.80>469.95 (-) 1.42e6



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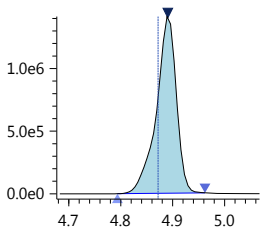
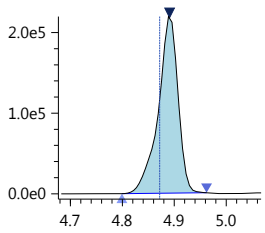
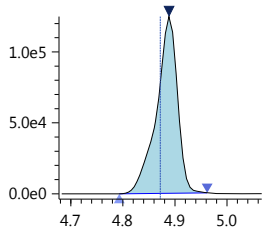
Conc 5.0492
RT 4.891 Area 3767244
Q 514.80>469.95 (-) 1.42e6



PFDA
Conc 0.9196
RT 4.891 Area 580043
Q 513.00>468.80 (-) 2.20e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.889 Area 346101
ISTD 528.80>509.00 (-) 1.25e5



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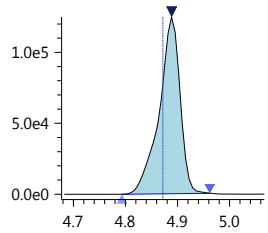
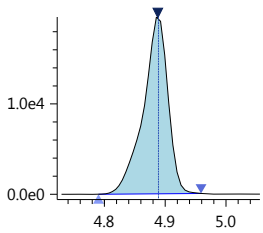
8_2-FTS-13C
Conc 4.1646
RT 4.889 Area 346101
Q 528.80>509.00 (-) 1.25e5



8_2-FTS_1
Conc 0.9081
RT 4.888 Area 55401
Q 527.10>506.90 (-) 1.96e4



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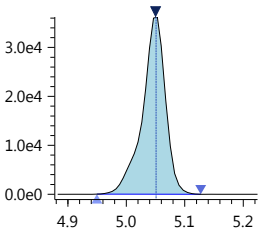
Conc 0.8738
RT 5.050 Area 99406
Q 599.00>79.90 (-) 3.62e4



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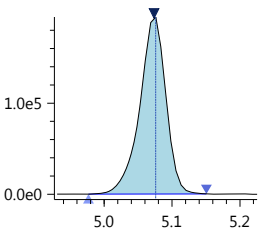
RT 5.073 Area 521750
Q 563.00>518.90 (-) 1.95e5



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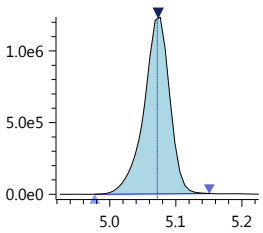
RT 5.073 Area 3363130
ISTD 564.80>519.95 (-) 1.24e6



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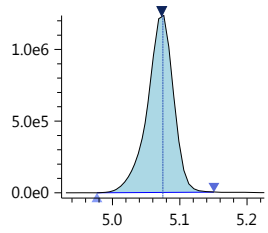

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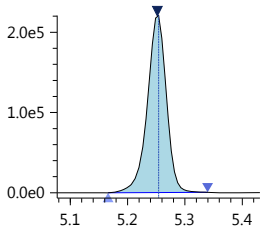
Q 613.05>569.00 (-) 2.21e5



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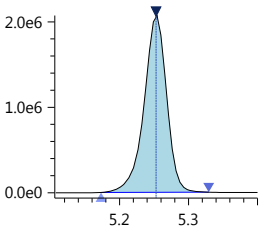
Conc 4.6522
RT 5.253 Area 4712403
Q 614.80>569.95 (-) 2.07e6



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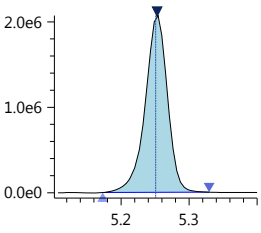
ISTD 614.80>569.95 (-) 2.07e6



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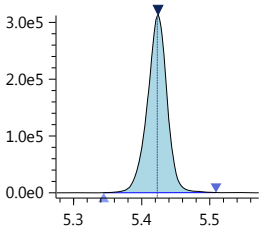

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Conc 1.0388
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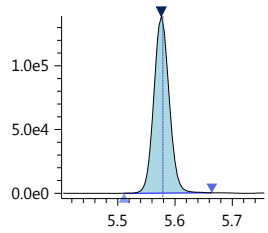
Q 713.40>669.00 (-) 1.39e5



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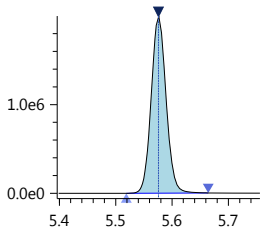

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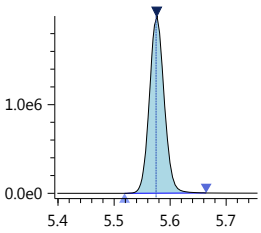

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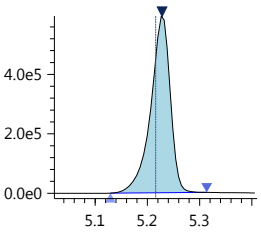

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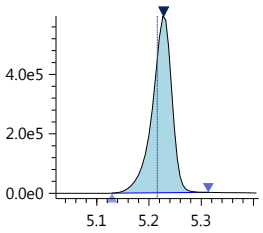

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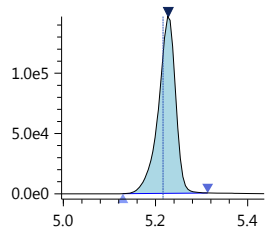

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RT 4.998 Area 70498
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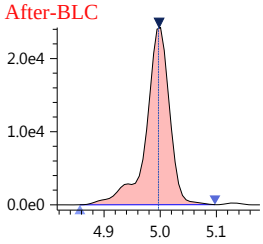
After-BLC



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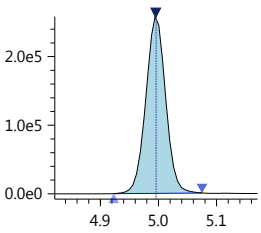
Conc 4.6837
RT 4.995 Area 611428
Q 572.80>419.05 (-) 2.58e5



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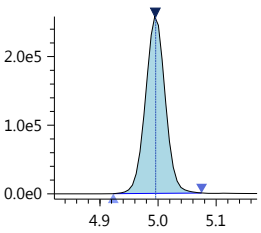

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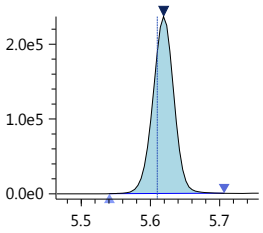
ISTD 514.90>168.90 (-) 2.37e5



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N-MeFOSA-d3
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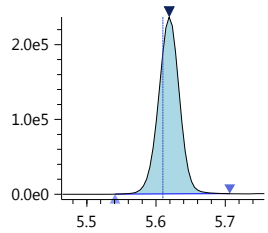
Q 514.90>168.90 (-) 2.37e5



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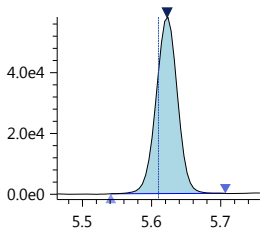

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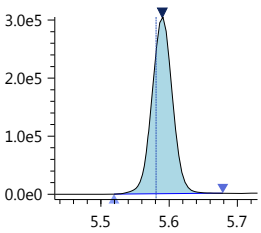
Q 622.70>59.10 (-) 3.05e5



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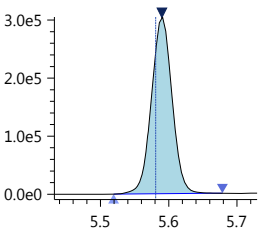

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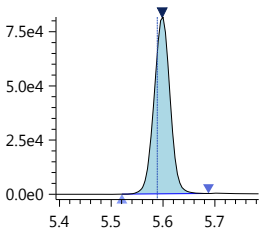

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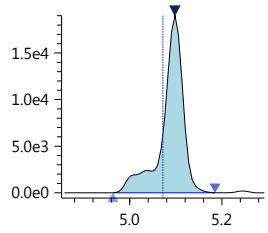
Q 584.20>418.95 (-) 1.90e4



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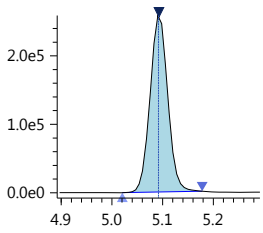
RT 5.093 Area 626343
ISTD 588.80>419.00 (-) 2.59e5



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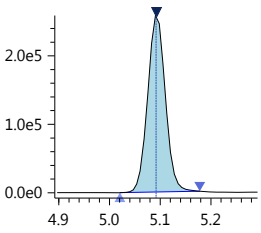

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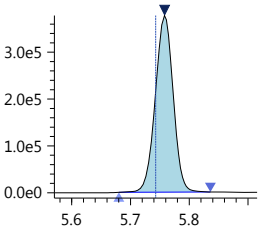

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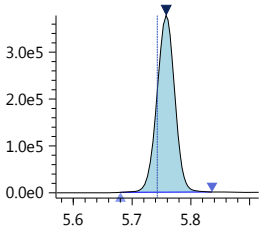
Q 530.90>169.15 (-) 3.78e5



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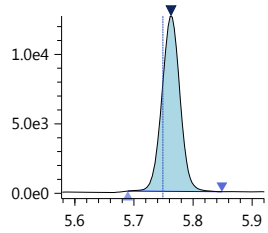

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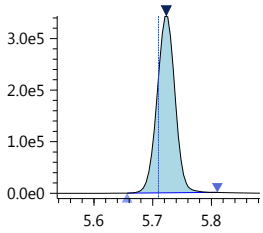

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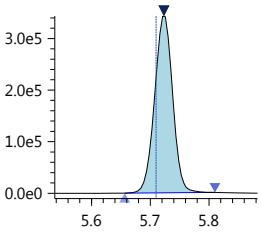

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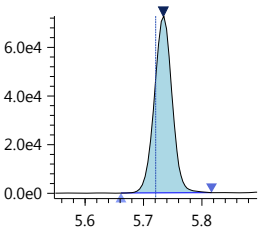

13C7-PFUnDA_IS
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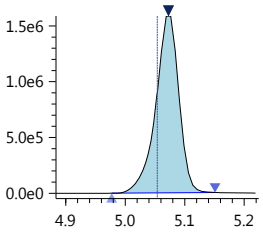
ISTD 570.00>525.00 (-) 1.59e6



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010419_119

Sample ID: 1.0 PPB CCV
Date acquired: 1/5/2019 11:03:32 AM
Acquired by: System Administrator
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PFBA-13C_IS
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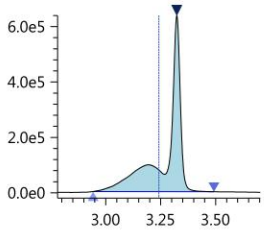
ISTD 216.90>172.15 (-) 6.40e5



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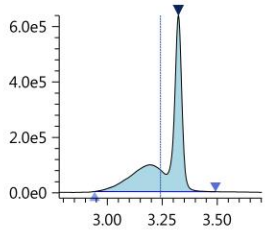
RT 3.323 Area 2540873
Q 216.90>172.15 (-) 6.40e5



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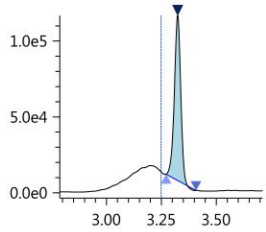

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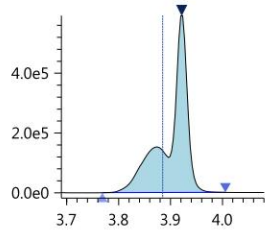

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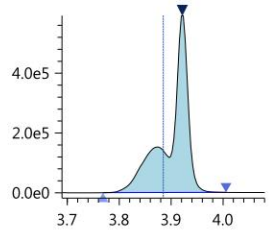

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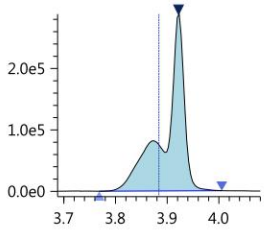

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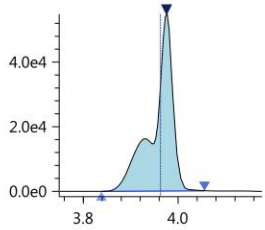

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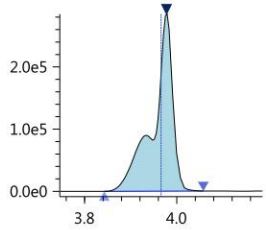

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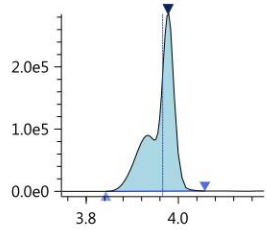

PFHxA-13C_IS
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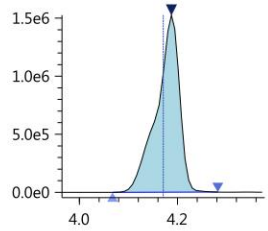
RT 4.188 Area 4865837
ISTD 314.90>270.10 (-) 1.53e6



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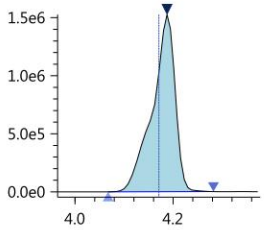
Conc 4.7368
RT 4.188 Area 4865837
Q 314.90>270.10 (-) 1.53e6



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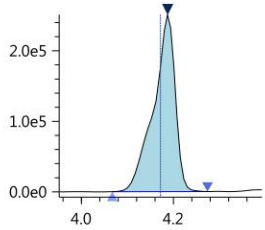
Conc 0.9499
RT 4.187 Area 816628
Q 313.00>269.00 (-) 2.51e5



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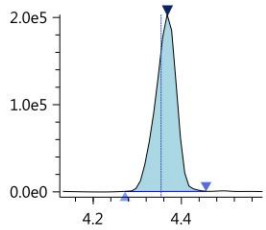
Conc 0.8109
RT 4.368 Area 670576
Q 362.90>319.00 (-) 2.03e5



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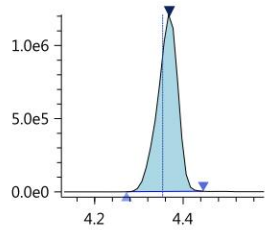
Conc 5.0000
RT 4.369 Area 3869041
ISTD 366.90>322.10 (-) 1.21e6



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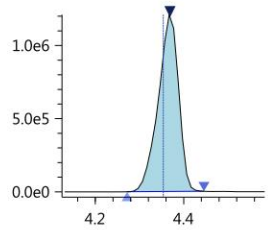

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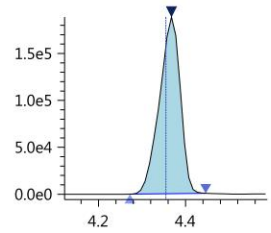
PFHxS-18O_IS
Conc 5.0000
RT 4.368 Area 627888
ISTD 402.70>84.05 (-) 1.89e5



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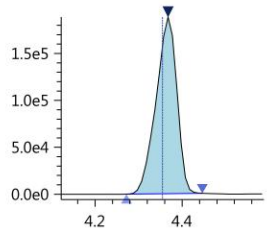
RT 4.368 Area 627888
Q 402.70>84.05 (-) 1.89e5



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Conc 0.7664
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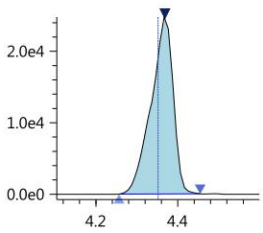
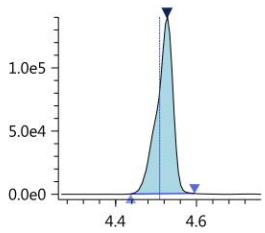
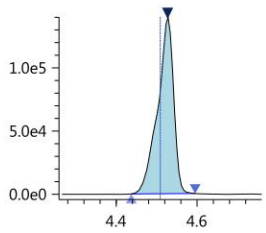
Q 399.00>80.00 (-) 2.48e4



6_2-FTS-13C
Conc 3.5796
RT 4.527 Area 382528
Q 428.90>409.00 (-) 1.40e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 382528
ISTD 428.90>409.00 (-) 1.40e5



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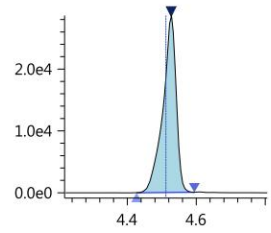
Conc 1.0801
RT 4.527 Area 76346
Q 427.00>407.00 (-) 2.87e4



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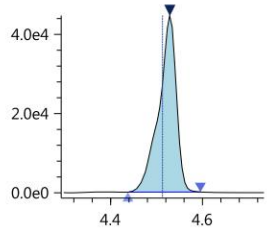
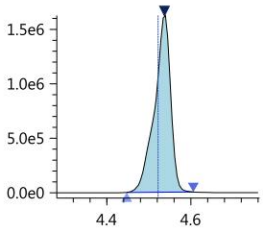
Conc 0.9306
RT 4.529 Area 117782
Q 449.00>80.15 (-) 4.48e4



PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 4305191
ISTD 416.80>372.05 (-) 1.63e6



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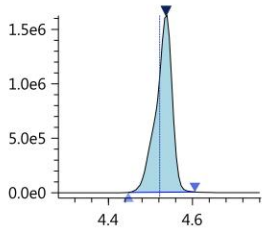
Q 416.80>372.05 (-) 1.63e6



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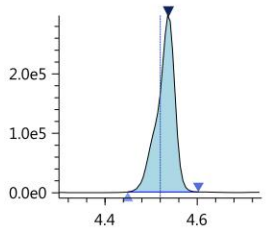
Q 413.00>369.00 (-) 2.98e5



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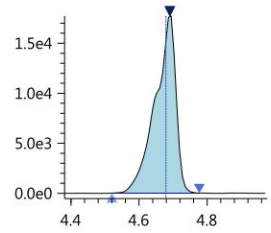
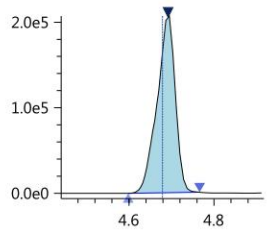
Conc 0.8216
RT 4.691 Area 74975
Q 499.00>80.00 (-) 1.77e4



PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 618740
ISTD 502.80>80.05 (-) 2.07e5



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Conc 4.9912
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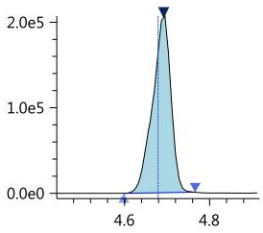
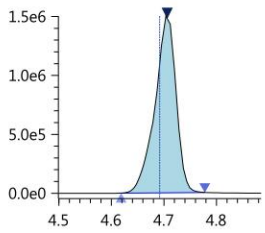
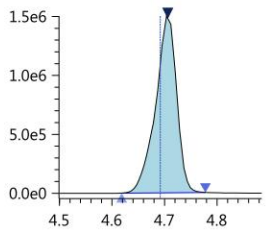
Q 502.80>80.05 (-) 2.07e5



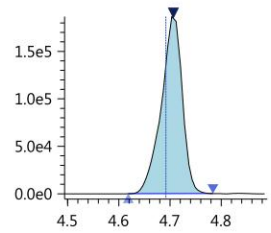
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4187329
ISTD 467.80>423.00 (-) 1.50e6



PFNA-13C
Conc 4.8994
RT 4.706 Area 4187329
Q 467.80>423.00 (-) 1.50e6



PFNA
Conc 0.9586
RT 4.707 Area 533080
Q 463.00>418.90 (-) 1.87e5



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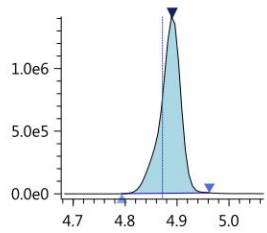
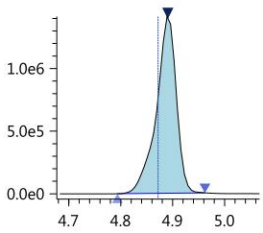
ISTD 514.80>469.95 (-) 1.42e6



PFDA-13C
Conc 5.0492
RT 4.891 Area 3767244
Q 514.80>469.95 (-) 1.42e6



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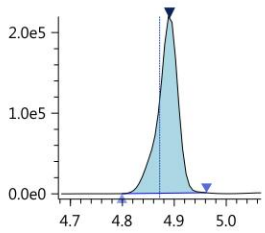
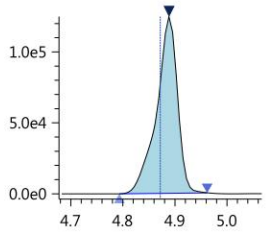
Conc 0.9196
RT 4.891 Area 580043
Q 513.00>468.80 (-) 2.20e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.889 Area 346101
ISTD 528.80>509.00 (-) 1.25e5



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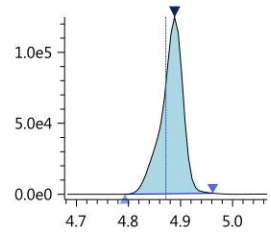
8_2-FTS-13C
Conc 4.1646
RT 4.889 Area 346101
Q 528.80>509.00 (-) 1.25e5



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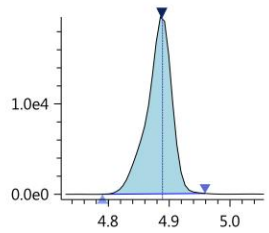
Conc 0.9081
RT 4.888 Area 55401
Q 527.10>506.90 (-) 1.96e4



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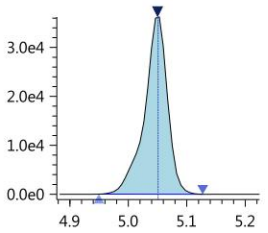
RT 5.050 Area 99406
Q 599.00>79.90 (-) 3.62e4



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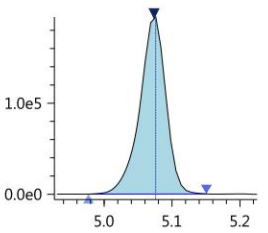
Conc 0.9598
RT 5.073 Area 521750
Q 563.00>518.90 (-) 1.95e5



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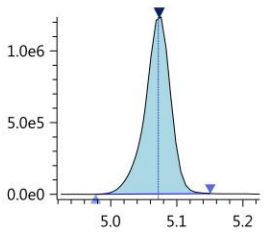
RT 5.073 Area 3363130
ISTD 564.80>519.95 (-) 1.24e6



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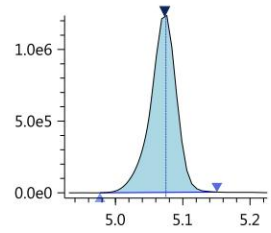
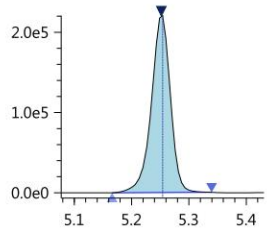
Q 564.80>519.95 (-) 1.24e6



PFDoA
Conc 0.9953
RT 5.252 Area 508660
Q 613.05>569.00 (-) 2.21e5



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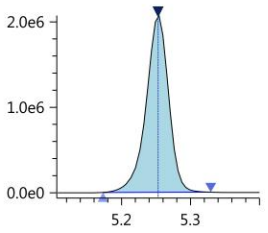
Conc 4.6522
RT 5.253 Area 4712403
Q 614.80>569.95 (-) 2.07e6



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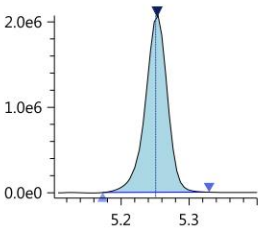
RT 5.253 Area 4712403
ISTD 614.80>569.95 (-) 2.07e6



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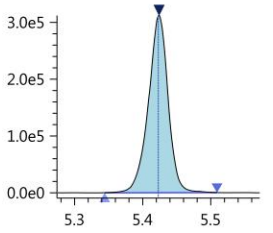
Conc 0.9610
RT 5.424 Area 632550
Q 663.00>618.90 (-) 3.12e5



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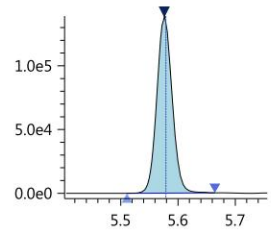
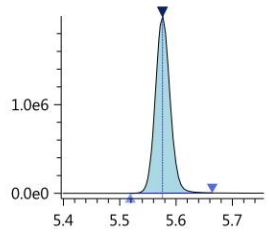
Conc 1.0388
RT 5.576 Area 258986
Q 713.40>669.00 (-) 1.39e5



PFTeDA-13C
Conc 5.0553
RT 5.576 Area 3664083
Q 714.70>669.90 (-) 2.00e6



PFTeDA-13C_IS
Conc 5.0000
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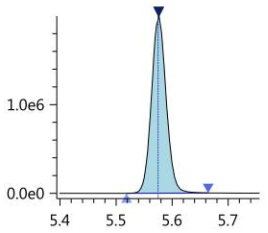
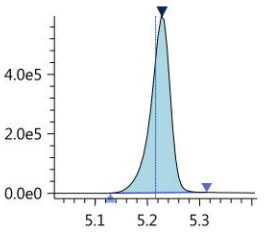


FOSA-13C_IS
Conc 5.0000
RT 5.228 Area 1542379
ISTD 506.00>78.05 (-) 5.97e5



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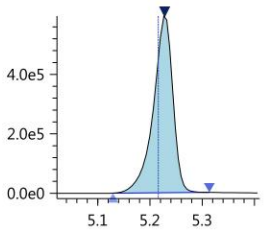
Q 506.00>78.05 (-) 5.97e5



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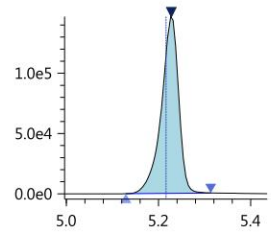
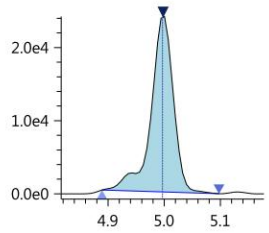
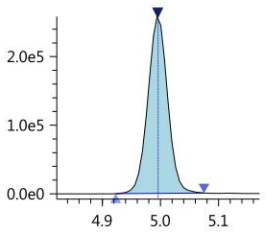
Conc 0.9269
RT 5.228 Area 381957
Q 498.20>78.00 (-) 1.47e5



N-MeFOSAA
Conc 1.0448
RT 4.998 Area 66969
Q 570.20>419.00 (-) 2.42e4



N-MeFOSAA-d3
Conc 4.6837
RT 4.995 Area 611428
Q 572.80>419.05 (-) 2.58e5



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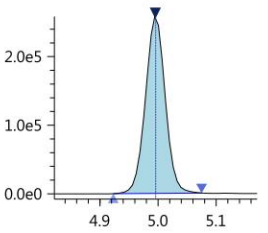
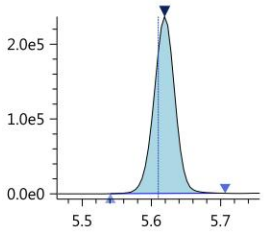
RT 4.995 Area 611428
ISTD 572.80>419.05 (-) 2.58e5



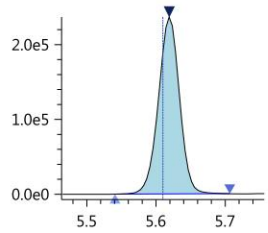
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.619 Area 501154
ISTD 514.90>168.90 (-) 2.37e5



Insight Report

Printed at 1/18/2019 8:51:07 AM

N-MeFOSA-d3
Conc 5.3393
RT 5.619 Area 501154
Q 514.90>168.90 (-) 2.37e5



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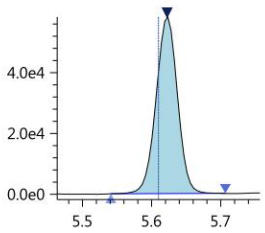
Conc 0.9493
RT 5.622 Area 125623
Q 512.00>169.10 (-) 5.83e4



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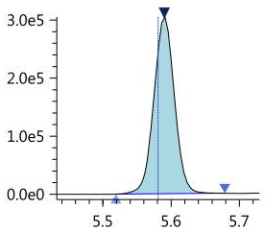
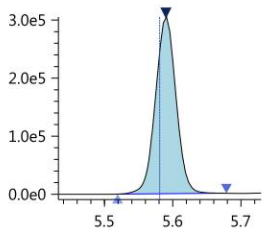
Conc 4.6863
RT 5.590 Area 638971
Q 622.70>59.10 (-) 3.05e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.590 Area 638971
ISTD 622.70>59.10 (-) 3.05e5



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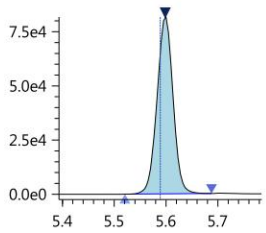
RT 5.598 Area 175715
Q 616.00>59.00 (-) 8.18e4



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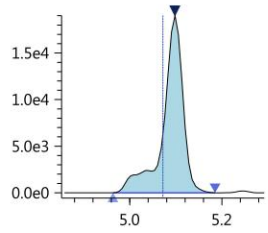
Conc 1.0096
RT 5.098 Area 56663
Q 584.20>418.95 (-) 1.90e4



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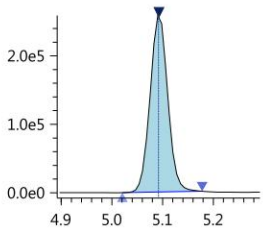
Conc 5.0000
RT 5.093 Area 626343
ISTD 588.80>419.00 (-) 2.59e5



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Conc 4.9976
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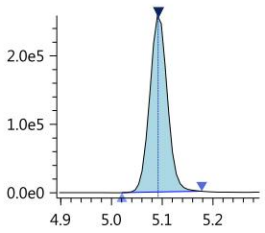
Q 588.80>419.00 (-) 2.59e5



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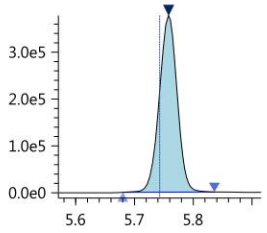
RT 5.758 Area 798996
ISTD 530.90>169.15 (-) 3.78e5



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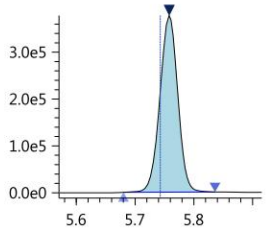
Conc 5.0767
RT 5.758 Area 798996
Q 530.90>169.15 (-) 3.78e5



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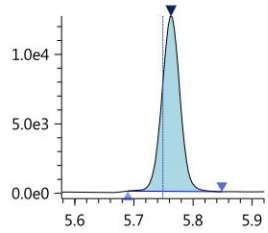

N-EtFOSE-d9_IS
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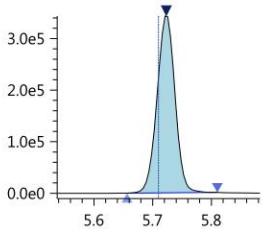
ISTD 638.70>59.10 (-) 3.44e5



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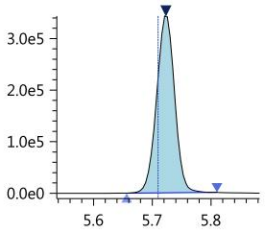
Q 638.70>59.10 (-) 3.44e5



N-EtFOSE
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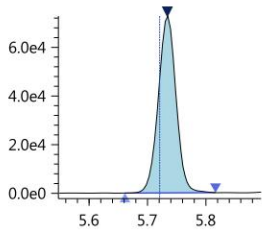
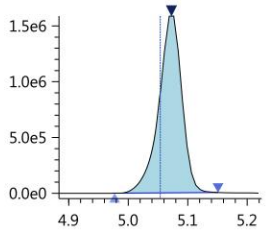
RT 5.734 Area 154003
Q 630.00>58.90 (-) 7.29e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.073 Area 4302081
ISTD 570.00>525.00 (-) 1.59e6



1st CM 01/28/19
2nd 01/28/19

Validation Report

Data File: J:\LCMS06\Data\190125_b6\190125_071
Lab ID: KQ1901091-01
RunType: CCV
Matrix: Water

Date Acquired: 1/25/19 20:04
Batch ID: 623320
Analysis Method: PFC/537M/PFOA

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st CM 01/28/19
2nd 01/28/19

Quantitation Report

Data File:	J:\LCMS06\Data\190125_b6\190125_071	**Instrument:**	K-LCMS-06
Acqu Date:	1/25/19 20:04	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1901091-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	1/22/19	**Receive Date:**	1/23/19

Analysis Lot:	623320	**Prep Lot:**		**Report Group:**	KQ1901091
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900021
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.071		5035241	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	3.973		1047155	5.2906	Y
18O2-PFHxS	4.360		641351	5.7243	Y
13C4-PFOS	4.689		761849	6.0310	Y
13C4-PFBA	3.331		3091559	5.6882	Y
13C5-PFPeA	3.918		1782985	5.3879	Y
13C2-PFHxA	4.181		5955113	5.2890	Y
13C4-PFHpA	4.361		5020840	5.4283	Y
13C4-PFOA	4.533		5901074	5.5997	Y
13C5-PFNA	4.703		4963911	5.4614	Y
13C2-PFDA	4.887		4690087	5.5694	Y
13C2-PFUnDA	5.071		4228270	5.1623	Y
13C2-PFDoDA	5.251		5304431	4.7379	Y
13C2-PFTeDA	5.574		3652326	4.1415	Y
13C8-FOSA	5.222		1913690	5.4613	Y
D3-MeFOSA	5.611		564222	4.5614	Y
D5-EtFOSA	5.751		851297	4.4076	Y
D7-MeFOSE	5.583		670277	4.4788	Y
D9-EtFOSE	5.717		787868	4.7757	Y
13C2-6:2 FTS	4.523		511784	6.4482	Y
13C2-8:2 FTS	4.886		333811	5.3348	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?

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 CM 01/28/19

2nd 01/28/19

Data File:	J:\LCMS06\Data\190125_b6\190125_071	**Instrument:**	K-LCMS-06
Acqu Date:	1/25/19 20:04	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1901091-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.971		192246	0.9125	Y
Perfluorohexane sulfonic acid (PFHxS)	4.355		115084	0.9031	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.525		151672	0.9883	Y
Perfluorooctane sulfonic acid (PFOS)	4.689		104281	0.9560	Y
Perfluorodecane sulfonic acid (PFDS)	5.048		122804	0.9342	Y
Perfluorobutanoic acid (PFBA)	3.332		602553	0.9800	Y
Perfluoropentanoic acid (PFPeA)	3.919		896760	0.9164	Y
Perfluorohexanoic acid (PFHxA)	4.181		1097611	0.9965	Y
Perfluoroheptanoic acid (PFHpA)	4.361		857867	0.9184	Y
Perfluorooctanoic acid (PFOA)	4.533		1097198	1.0939	Y
Perfluorononanoic acid (PFNA)	4.703		666966	0.9544	Y
Perfluorodecanoic acid (PFDA)	4.887		743278	0.9379	Y
Perfluoroundecanoic acid (PFUnDA)	5.071		676974	0.9853	Y
Perfluorododecanoic acid (PFDoDA)	5.251		544755	0.9515	Y
Perfluorotridecanoic acid (PFTrDA)	5.422		648703	1.0257	Y
Perfluorotetradecanoic acid (PFTeDA)	5.574		260011	0.9528	Y
Perfluorooctane sulfonamide (FOSA)	5.221		454315	0.8865	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.614		141934	0.9840	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.757		26897	0.9884	Y
N-Methyl perfluorooctane sulfonamidoethanol	5.591		168314	0.9125	Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.728		140436	0.8673	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.524		98898	0.9767	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.885		49699	0.9376	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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Insight Report

Printed at 1/28/2019 12:21:32 PM

Batch File: ----
Method File: J:\LCMS06\Data\190125_b6\190125_b6.lcm
Project File: J:\LCMS06\Data\190125_b6\190125_b6.damlp
Flags File: J:\LCMS06\Data\190125_b6\190125_b6.damlp

190125_071

Sample ID: 1.0 PPB CCV
Date acquired: 1/25/2019 8:04:49 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190125_b6\190125_071.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.331	3091559	3091559	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.331	3091559	5035241	26	5.6882	ng/mL	5.0000
PFBA	M	3.332	602553	3091559	2	0.9800	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.918	1782985	1782985	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.918	1782985	5035241	26	5.3879	ng/mL	5.0000
PFPeA	Auto	3.919	896760	1782985	4	0.9164	ng/mL	1.0000
PFBS_1	Auto	3.971	192246	1047155	16	0.9125	ng/mL	0.8874
PFBS-13C	Auto	3.973	1047155	5035241	26	5.2906	ng/mL	5.0000
PFBS-13C_IS	Auto	3.973	1047155	1047155	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.181	5955113	5955113	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.181	5955113	5035241	26	5.2890	ng/mL	5.0000
PFHxA	Auto	4.181	1097611	5955113	6	0.9965	ng/mL	1.0000
PFHpA	Auto	4.361	857867	5020840	8	0.9184	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.361	5020840	5020840	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.361	5020840	5035241	26	5.4283	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.360	641351	641351	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.360	641351	5035241	26	5.7243	ng/mL	5.0000
PFHxS_1	Auto	4.355	115084	641351	7	0.9031	ng/mL	0.9131
6_2-FTS-13C	Auto	4.523	511784	5035241	26	6.4482	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.523	511784	511784	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.524	98898	511784	10	0.9767	ng/mL	0.9512
PFHpS_1	Auto	4.525	151672	641351	7	0.9883	ng/mL	0.9534
PFOA-13C_IS	Auto	4.533	5901074	5901074	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.533	5901074	5035241	26	5.5997	ng/mL	5.0000
PFOA	Auto	4.533	1097198	5901074	9	1.0939	ng/mL	1.0000
PFOS_1	Auto	4.689	104281	761849	13	0.9560	ng/mL	0.9292
PFOS-13C_IS	Auto	4.689	761849	761849	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.689	761849	5035241	26	6.0310	ng/mL	5.0000
PFNA-13C_IS	Auto	4.703	4963911	4963911	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.703	4963911	5035241	26	5.4614	ng/mL	5.0000
PFNA	Auto	4.703	666966	4963911	11	0.9544	ng/mL	1.0000
PFDA-13C_IS	Auto	4.887	4690087	4690087	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.887	4690087	5035241	26	5.5694	ng/mL	5.0000
PFDA	Auto	4.887	743278	4690087	12	0.9379	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.886	333811	333811	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.886	333811	5035241	26	5.3348	ng/mL	5.0000
8_2-FTS_1	Auto	4.885	49699	333811	15	0.9376	ng/mL	0.9600
PFDS_1	Auto	5.048	122804	761849	13	0.9342	ng/mL	0.9647
PFUnA	Auto	5.071	676974	4228270	14	0.9853	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.071	4228270	4228270	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.071	4228270	5035241	26	5.1623	ng/mL	5.0000
PFDoA	Auto	5.251	544755	5304431	17	0.9515	ng/mL	1.0000
PFDoA-13C	Auto	5.251	5304431	5035241	26	4.7379	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.251	5304431	5304431	17	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.422	648703	3652326	22	1.0257	ng/mL	1.0000
PFTeDA	Auto	5.574	260011	3652326	22	0.9528	ng/mL	1.0000
PFTeDA-13C	Auto	5.574	3652326	5035241	26	4.1415	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.574	3652326	3652326	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.222	1913690	1913690	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.222	1913690	5035241	26	5.4613	ng/mL	5.0000
FOSA	Auto	5.221	454315	1913690	18	0.8865	ng/mL	1.0000
N-MeFOSA-d3_IS	Auto	5.611	564222	564222	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.611	564222	5035241	26	4.5614	ng/mL	5.0000
N-MeFOSA	Auto	5.614	141934	564222	1	0.9840	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.583	670277	5035241	26	4.4788	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.583	670277	670277	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.591	168314	670277	20	0.9125	ng/mL	1.0000
N-EtFOSA-d9_IS	Auto	5.751	851297	851297	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.751	851297	5035241	26	4.4076	ng/mL	5.0000
N-EtFOSA	Auto	5.757	26897	851297	23	0.9884	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.717	787868	787868	24	5.0000	ng/mL	5.0000

Insight Report

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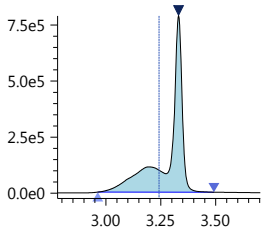
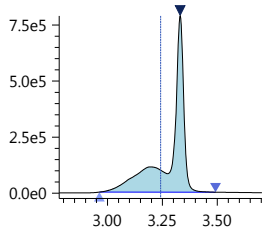
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSE-d9	Auto	5.717	787868	5035241	26	4.7757	ng/mL	5.0000
N-EtFOSE	Auto	5.728	140436	787868	24	0.8673	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.071	5035241	5035241	26	5.0000	ng/mL	5.0000

PFBA-13C_IS
Conc 5.0000
RT 3.331 Area 3091559
ISTD 216.90>172.15 (-) 7.91e5

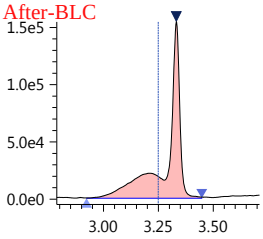


PFBA-13C
Conc 5.6882
RT 3.331 Area 3091559
Q 216.90>172.15 (-) 7.91e5

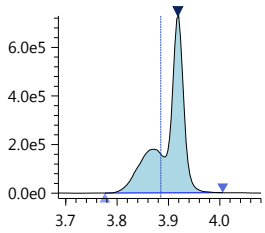


PFBA
Conc 0.9800
RT 3.332 Area 602553
Q 213.00>169.10 (-) 1.55e5

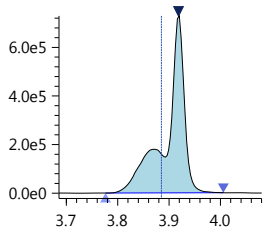
After-BLC



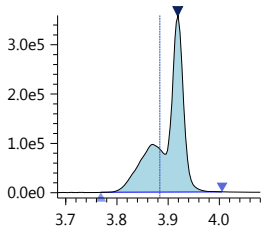
PFPeA-13C_IS
Conc 5.0000
RT 3.918 Area 1782985
ISTD 267.90>223.00 (-) 7.29e5



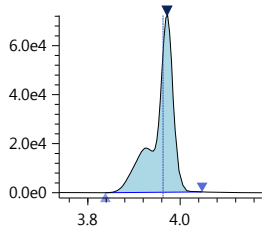
PFPeA-13C
Conc 5.3879
RT 3.918 Area 1782985
Q 267.90>223.00 (-) 7.29e5



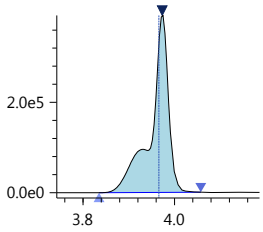
PFPeA
Conc 0.9164
RT 3.919 Area 896760
Q 263.05>219.10 (-) 3.59e5



PFBS_1
Conc 0.9125
RT 3.971 Area 192246
Q 299.00>80.00 (-) 7.23e4



PFBS-13C
Conc 5.2906
RT 3.973 Area 1047155
Q 301.80>80.00 (-) 3.92e5



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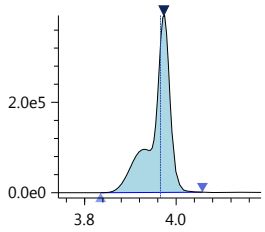
ISTD 301.80>80.00 (-) 3.92e5



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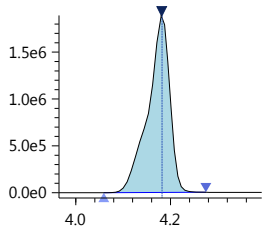
Conc 5.0000
RT 4.181 Area 5955113
ISTD 314.90>270.10 (-) 1.89e6



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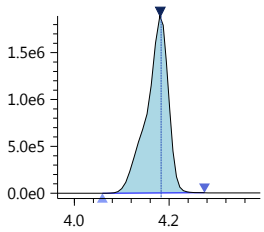
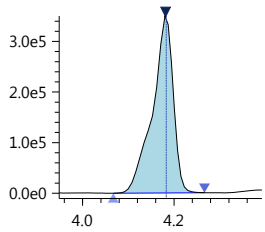
Conc 5.2890
RT 4.181 Area 5955113
Q 314.90>270.10 (-) 1.89e6



PFHxA
Conc 0.9965
RT 4.181 Area 1097611
Q 313.00>269.00 (-) 3.50e5



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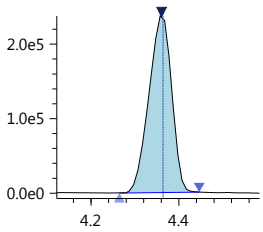
RT 4.361 Area 857867
Q 362.90>319.00 (-) 2.38e5



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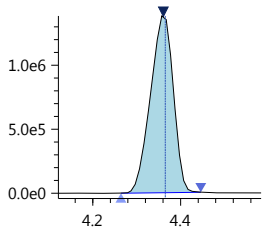
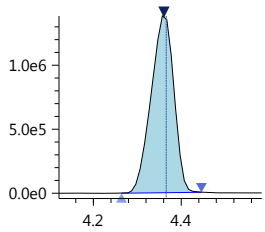
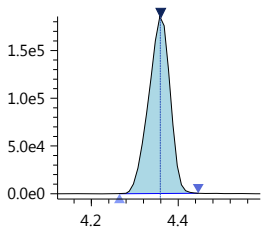
Conc 5.0000
RT 4.361 Area 5020840
ISTD 366.90>322.10 (-) 1.38e6



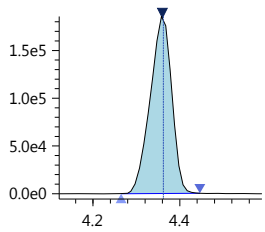
PFHpA-13C
Conc 5.4283
RT 4.361 Area 5020840
Q 366.90>322.10 (-) 1.38e6



PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 641351
ISTD 402.70>84.05 (-) 1.86e5



PFHxS-18O
Conc 5.7243
RT 4.360 Area 641351
Q 402.70>84.05 (-) 1.86e5



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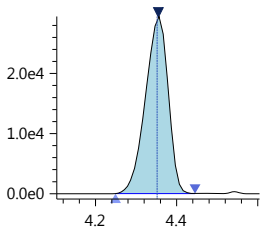
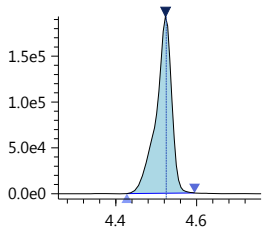
Conc 0.9031
RT 4.355 Area 115084
Q 399.00>80.00 (-) 2.95e4



6_2-FTS-13C
Conc 6.4482
RT 4.523 Area 511784
Q 428.90>409.00 (-) 1.93e5



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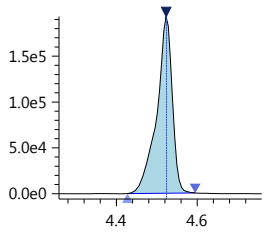
RT 4.523 Area 511784
ISTD 428.90>409.00 (-) 1.93e5



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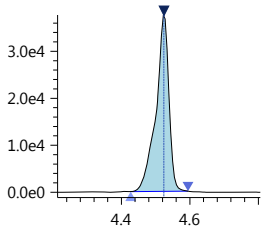
6_2-FTS_1
Conc 0.9767
RT 4.524 Area 98898
Q 427.00>407.00 (-) 3.77e4



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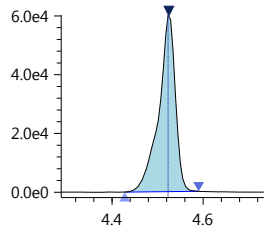
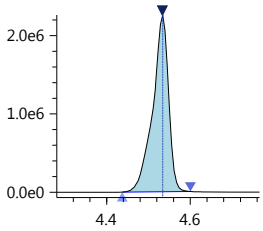
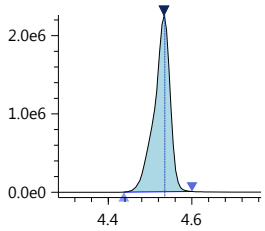
Q 449.00>80.15 (-) 6.03e4



PFOA-13C_IS
Conc 5.0000
RT 4.533 Area 5901074
ISTD 416.80>372.05 (-) 2.26e6



PFOA-13C
Conc 5.5997
RT 4.533 Area 5901074
Q 416.80>372.05 (-) 2.26e6



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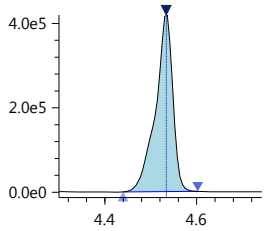
Q 413.00>369.00 (-) 4.20e5



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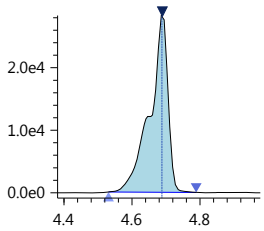
Conc 0.9560
RT 4.689 Area 104281
Q 499.00>80.00 (-) 2.84e4



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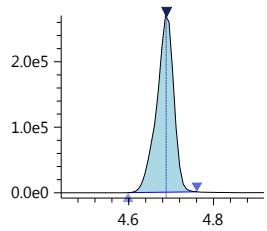
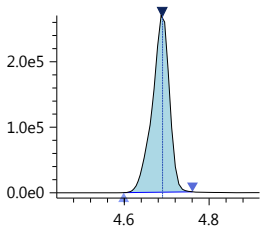
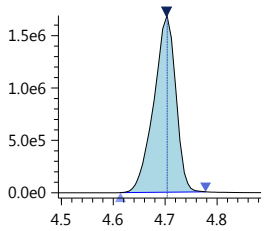
Conc 5.0000
RT 4.689 Area 761849
ISTD 502.80>80.05 (-) 2.71e5



PFOS-13C
Conc 6.0310
RT 4.689 Area 761849
Q 502.80>80.05 (-) 2.71e5



PFNA-13C_IS
Conc 5.0000
RT 4.703 Area 4963911
ISTD 467.80>423.00 (-) 1.69e6



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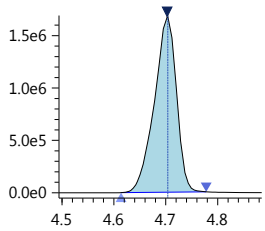
Conc 5.4614
RT 4.703 Area 4963911
Q 467.80>423.00 (-) 1.69e6



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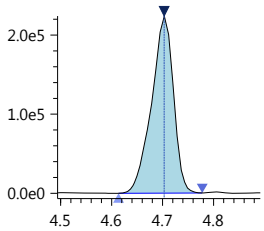
Conc 0.9544
RT 4.703 Area 666966
Q 463.00>418.90 (-) 2.24e5



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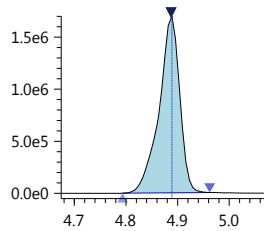
RT 4.887 Area 4690087
ISTD 514.80>469.95 (-) 1.70e6



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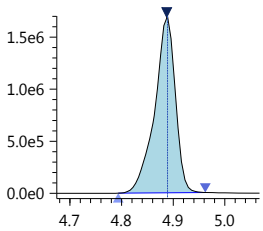
Conc 5.5694
RT 4.887 Area 4690087
Q 514.80>469.95 (-) 1.70e6



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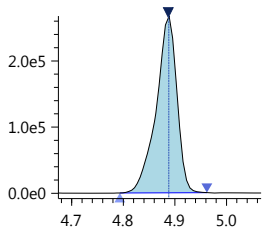
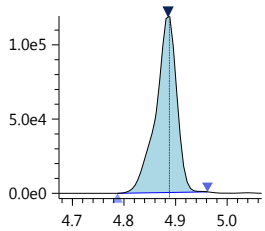
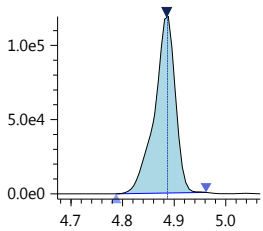
RT 4.887 Area 743278
Q 513.00>468.80 (-) 2.68e5



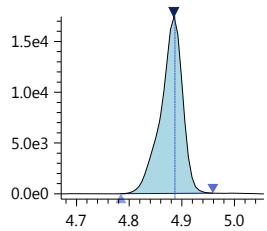
8_2-FTS-13C_IS
Conc 5.0000
RT 4.886 Area 333811
ISTD 528.80>509.00 (-) 1.19e5



8_2-FTS-13C
Conc 5.3348
RT 4.886 Area 333811
Q 528.80>509.00 (-) 1.19e5



8_2-FTS_1
Conc 0.9376
RT 4.885 Area 49699
Q 527.10>506.90 (-) 1.75e4



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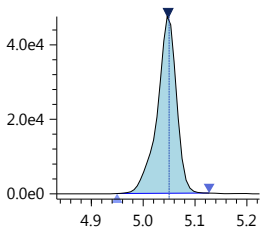
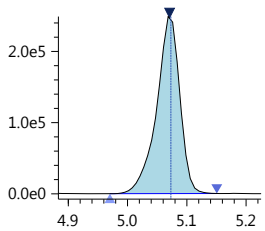
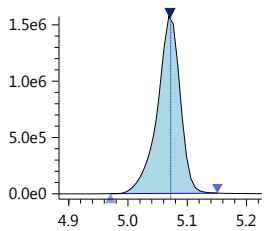
RT 5.048 Area 122804
Q 599.00>79.90 (-) 4.76e4



PFUnA
Conc 0.9853
RT 5.071 Area 676974
Q 563.00>518.90 (-) 2.49e5



PFUnA-13C_IS
Conc 5.0000
RT 5.071 Area 4228270
ISTD 564.80>519.95 (-) 1.57e6



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PFUnA-13C
Conc 5.1623
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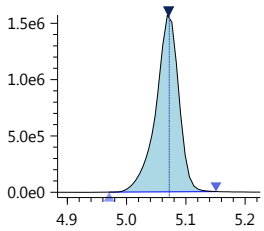
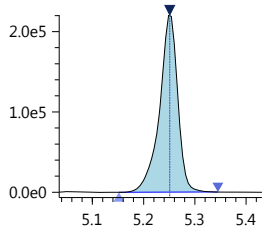
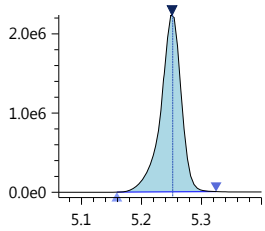
Q 564.80>519.95 (-) 1.57e6



PFDoA
Conc 0.9515
RT 5.251 Area 544755
Q 613.05>569.00 (-) 2.21e5



PFDoA-13C
Conc 4.7379
RT 5.251 Area 5304431
Q 614.80>569.95 (-) 2.24e6



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RT 5.251 Area 5304431
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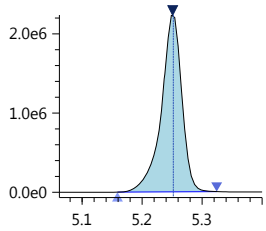

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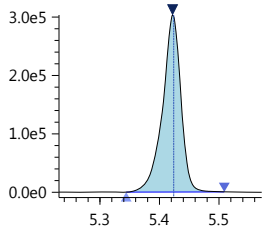
Q 663.00>618.90 (-) 3.04e5



PFTeDA
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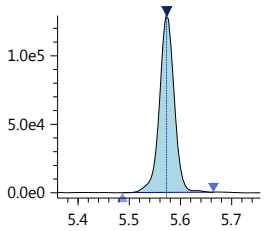
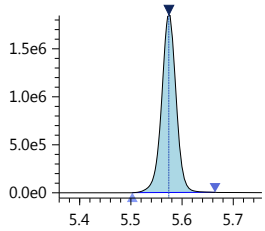
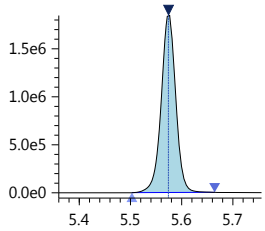
RT 5.574 Area 260011
Q 713.40>669.00 (-) 1.29e5



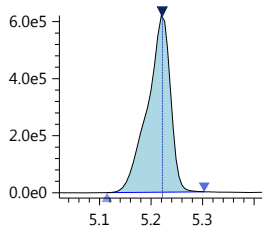
PFTeDA-13C
Conc 4.1415
RT 5.574 Area 3652326
Q 714.70>669.90 (-) 1.85e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.574 Area 3652326
ISTD 714.70>669.90 (-) 1.85e6



FOSA-13C_IS
Conc 5.0000
RT 5.222 Area 1913690
ISTD 506.00>78.05 (-) 6.21e5



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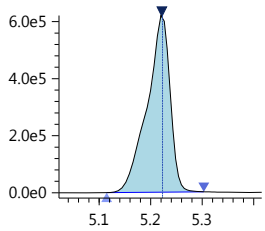
Conc 5.4613
RT 5.222 Area 1913690
Q 506.00>78.05 (-) 6.21e5



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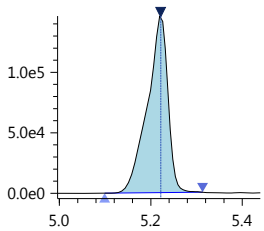
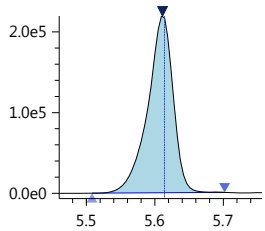
RT 5.221 Area 454315
Q 498.20>78.00 (-) 1.47e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.611 Area 564222
ISTD 514.90>168.90 (-) 2.20e5



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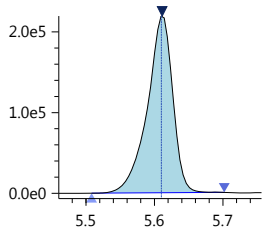
RT 5.611 Area 564222
Q 514.90>168.90 (-) 2.20e5



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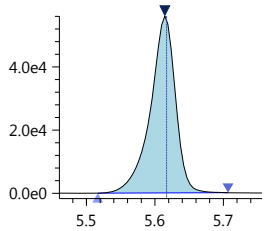
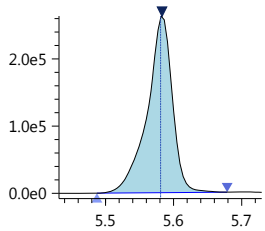
RT 5.614 Area 141934
Q 512.00>169.10 (-) 5.61e4



N-MeFOSE-d7
Conc 4.4788
RT 5.583 Area 670277
Q 622.70>59.10 (-) 2.64e5



N-MeFOSE-d7_IS
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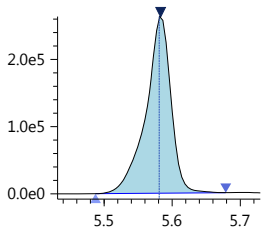
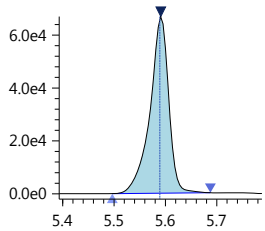
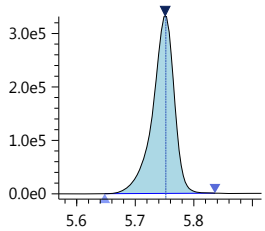
ISTD 622.70>59.10 (-) 2.64e5



N-MeFOSE
Conc 0.9125
RT 5.591 Area 168314
Q 616.00>59.00 (-) 6.70e4



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.751 Area 851297
ISTD 530.90>169.15 (-) 3.32e5



N-EtFOSA-d9
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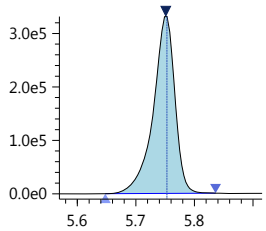
RT 5.751 Area 851297
Q 530.90>169.15 (-) 3.32e5



N-EtFOSA
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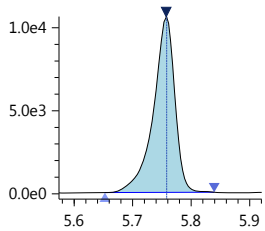
RT 5.757 Area 26897
Q 526.90>169.10 (-) 1.07e4



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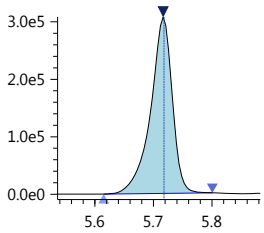
N-EtFOSE-d9_IS

Conc 5.0000
RT 5.717 Area 787868
ISTD 638.70>59.10 (-) 3.08e5



N-EtFOSE-d9

Conc 4.7757
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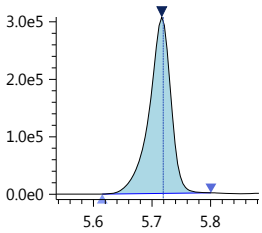
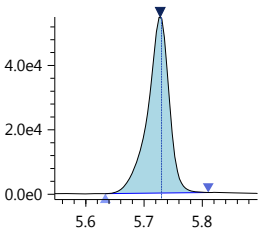
Q 638.70>59.10 (-) 3.08e5



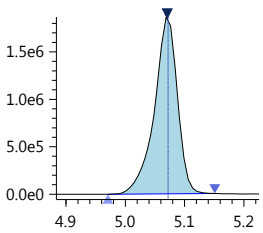
N-EtFOSE

Conc 0.8673
RT 5.728 Area 140436
Q 630.00>58.90 (-) 5.51e4



13C7-PFUnDA_IS

Conc 5.0000
RT 5.071 Area 5035241
ISTD 570.00>525.00 (-) 1.87e6



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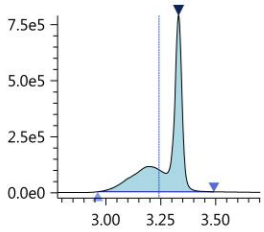
Project File: J:\LCMS06\Data\190125_b6\190125_b6.damlp
Flags File: J:\LCMS06\Data\190125_b6\190125_b6.damlp

190125_071

Sample ID: 1.0 PPB CCV
Date acquired: 1/25/2019 8:04:49 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190125_b6\190125_071.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

PFBA-13C_IS
Conc 5.0000
RT 3.331 Area 3091559
ISTD 216.90>172.15 (-) 7.91e5



PFBA-13C
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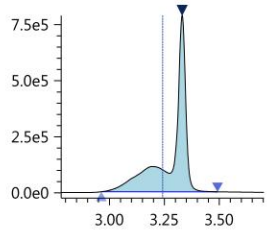
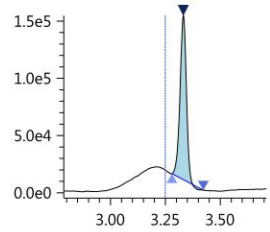
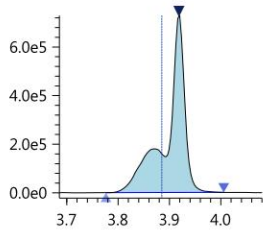
Q 216.90>172.15 (-) 7.91e5



PFBA
Conc 0.4661
RT 3.332 Area 286576
Q 213.00>169.10 (-) 1.55e5



PFPeA-13C_IS
Conc 5.0000
RT 3.918 Area 1782985
ISTD 267.90>223.00 (-) 7.29e5



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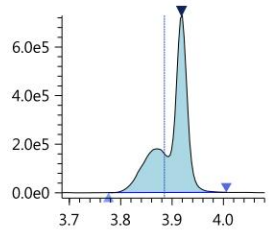
RT 3.918 Area 1782985
Q 267.90>223.00 (-) 7.29e5



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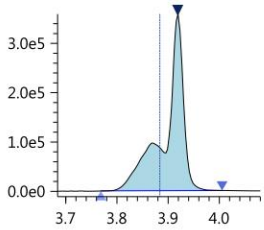
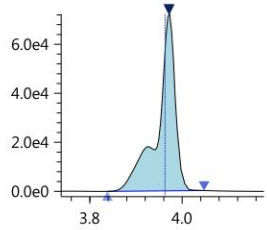
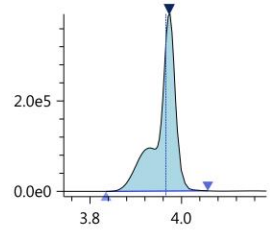
Conc 0.9164
RT 3.919 Area 896760
Q 263.05>219.10 (-) 3.59e5



PFBS_1
Conc 0.9125
RT 3.971 Area 192246
Q 299.00>80.00 (-) 7.23e4



PFBS-13C
Conc 5.2906
RT 3.973 Area 1047155
Q 301.80>80.00 (-) 3.92e5



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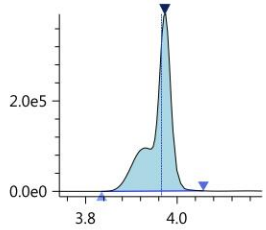

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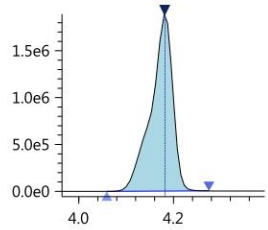
RT 4.181 Area 5955113
ISTD 314.90>270.10 (-) 1.89e6



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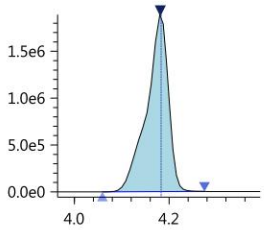
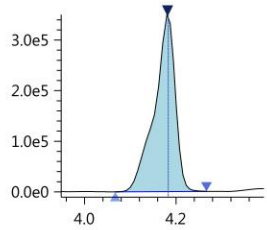
Q 314.90>270.10 (-) 1.89e6



PFHxA
Conc 0.9965
RT 4.181 Area 1097611
Q 313.00>269.00 (-) 3.50e5



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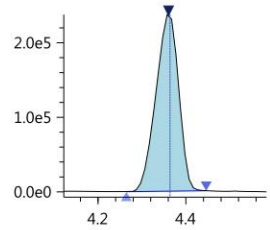
RT 4.361 Area 857867
Q 362.90>319.00 (-) 2.38e5



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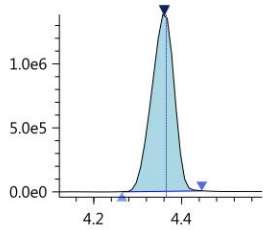
ISTD 366.90>322.10 (-) 1.38e6



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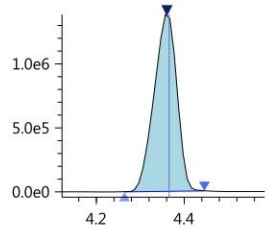
Q 366.90>322.10 (-) 1.38e6



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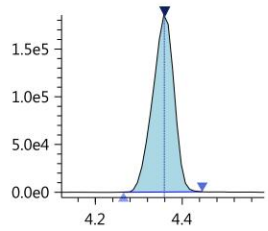
PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 641351
ISTD 402.70>84.05 (-) 1.86e5



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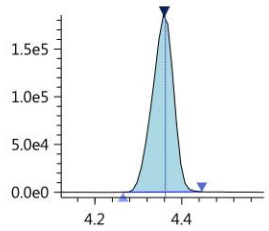
Q 402.70>84.05 (-) 1.86e5



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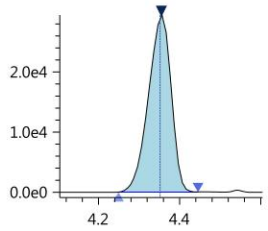
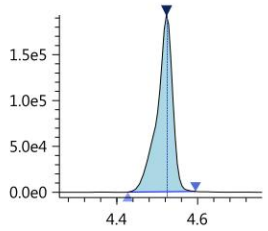
Conc 0.9031
RT 4.355 Area 115084
Q 399.00>80.00 (-) 2.95e4



6_2-FTS-13C
Conc 6.4482
RT 4.523 Area 511784
Q 428.90>409.00 (-) 1.93e5



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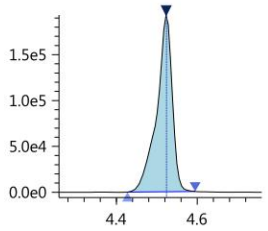

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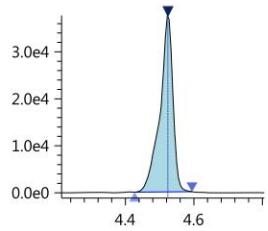
RT 4.524 Area 98898
Q 427.00>407.00 (-) 3.77e4



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Conc 0.9883
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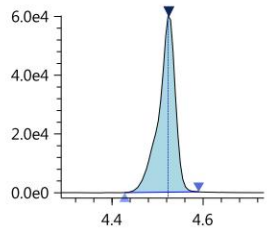
Q 449.00>80.15 (-) 6.03e4



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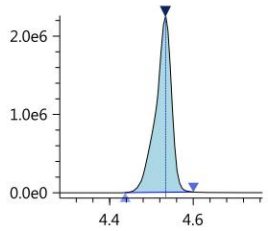
RT 4.533 Area 5901074
ISTD 416.80>372.05 (-) 2.26e6



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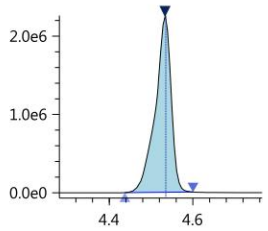
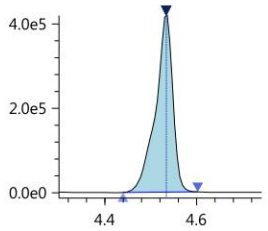
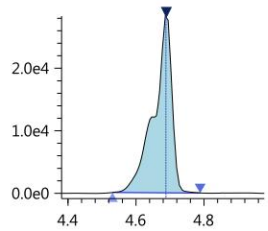
Conc 5.5997
RT 4.533 Area 5901074
Q 416.80>372.05 (-) 2.26e6



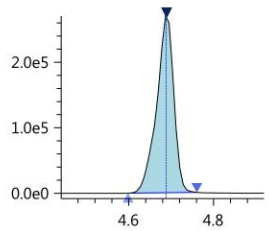
PFOA
Conc 1.0939
RT 4.533 Area 1097198
Q 413.00>369.00 (-) 4.20e5



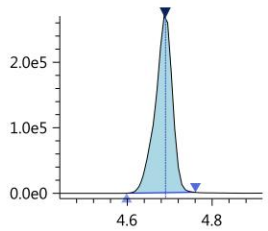
PFOS_1
Conc 0.9560
RT 4.689 Area 104281
Q 499.00>80.00 (-) 2.84e4



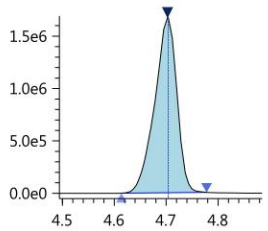
PFOS-13C_IS
Conc 5.0000
RT 4.689 Area 761849
ISTD 502.80>80.05 (-) 2.71e5



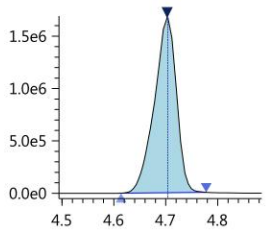
PFOS-13C
Conc 6.0310
RT 4.689 Area 761849
Q 502.80>80.05 (-) 2.71e5



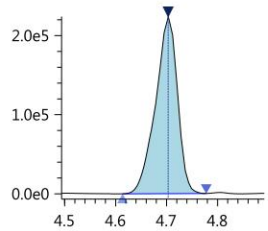
PFNA-13C_IS
Conc 5.0000
RT 4.703 Area 4963911
ISTD 467.80>423.00 (-) 1.69e6



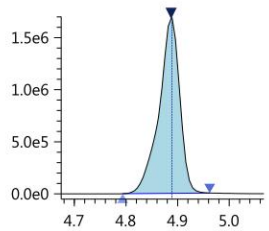
PFNA-13C
Conc 5.4614
RT 4.703 Area 4963911
Q 467.80>423.00 (-) 1.69e6



PFNA
Conc 0.9544
RT 4.703 Area 666966
Q 463.00>418.90 (-) 2.24e5



PFDA-13C_IS
Conc 5.0000
RT 4.887 Area 4690087
ISTD 514.80>469.95 (-) 1.70e6



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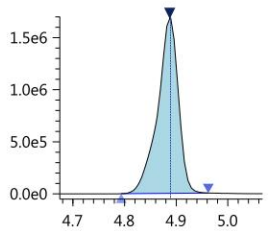
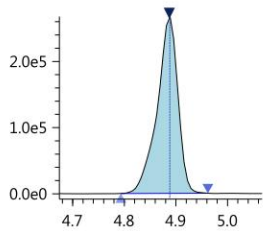
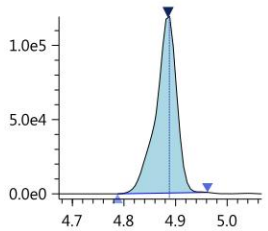
Conc 5.5694
RT 4.887 Area 4690087
Q 514.80>469.95 (-) 1.70e6



PFDA
Conc 0.9379
RT 4.887 Area 743278
Q 513.00>468.80 (-) 2.68e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.886 Area 333811
ISTD 528.80>509.00 (-) 1.19e5



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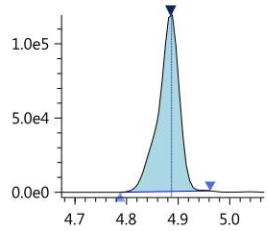
8_2-FTS-13C
Conc 5.3348
RT 4.886 Area 333811
Q 528.80>509.00 (-) 1.19e5



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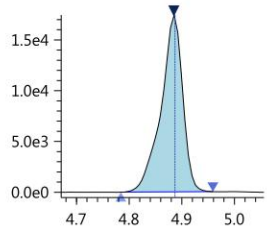
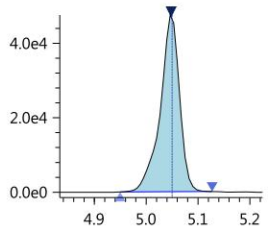
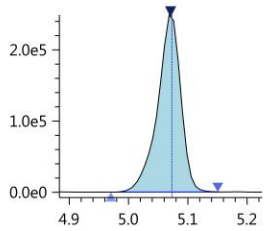
Conc 0.9376
RT 4.885 Area 49699
Q 527.10>506.90 (-) 1.75e4



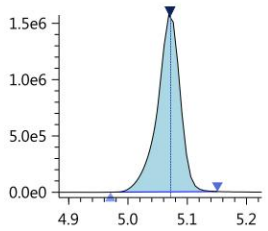
PFDS_1
Conc 0.9342
RT 5.048 Area 122804
Q 599.00>79.90 (-) 4.76e4



PFUnA
Conc 0.9853
RT 5.071 Area 676974
Q 563.00>518.90 (-) 2.49e5



PFUnA-13C_IS
Conc 5.0000
RT 5.071 Area 4228270
ISTD 564.80>519.95 (-) 1.57e6



PFUnA-13C
Conc 5.1623
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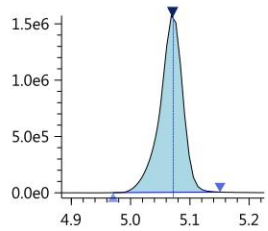
Q 564.80>519.95 (-) 1.57e6



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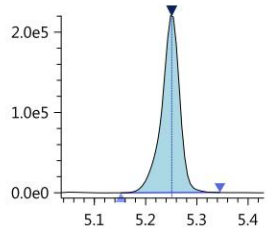
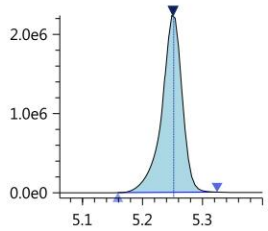
Conc 0.9515
RT 5.251 Area 544755
Q 613.05>569.00 (-) 2.21e5



PFDoA-13C
Conc 4.7379
RT 5.251 Area 5304431
Q 614.80>569.95 (-) 2.24e6



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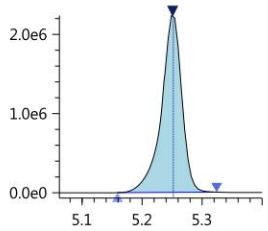
Conc 5.0000
RT 5.251 Area 5304431
ISTD 614.80>569.95 (-) 2.24e6



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Conc 1.0257
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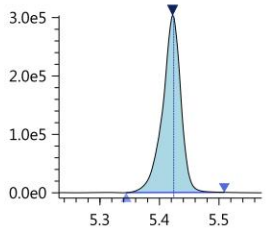
Q 663.00>618.90 (-) 3.04e5



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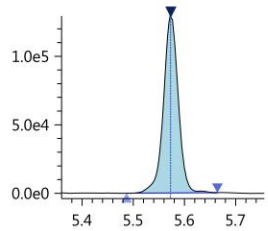
RT 5.574 Area 260011
Q 713.40>669.00 (-) 1.29e5



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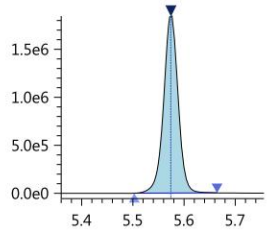
Conc 4.1415
RT 5.574 Area 3652326
Q 714.70>669.90 (-) 1.85e6



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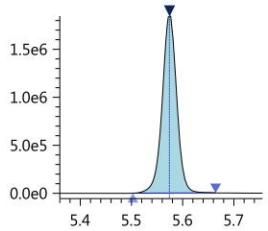

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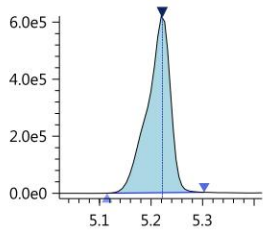
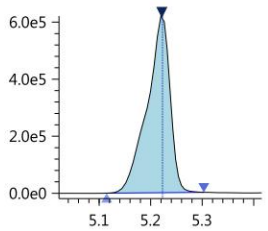
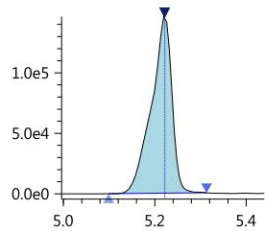
Conc 5.0000
RT 5.222 Area 1913690
ISTD 506.00>78.05 (-) 6.21e5



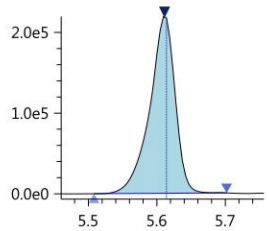
FOSA-13C
Conc 5.4613
RT 5.222 Area 1913690
Q 506.00>78.05 (-) 6.21e5



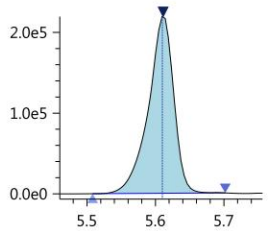
FOSA
Conc 0.8865
RT 5.221 Area 454315
Q 498.20>78.00 (-) 1.47e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.611 Area 564222
ISTD 514.90>168.90 (-) 2.20e5



N-MeFOSA-d3
Conc 4.5614
RT 5.611 Area 564222
Q 514.90>168.90 (-) 2.20e5



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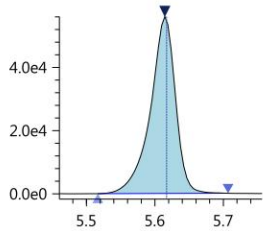
Conc 0.9840
RT 5.614 Area 141934
Q 512.00>169.10 (-) 5.61e4



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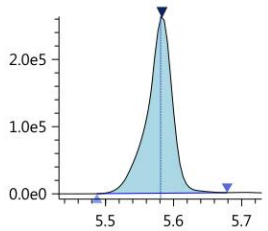
Conc 4.4788
RT 5.583 Area 670277
Q 622.70>59.10 (-) 2.64e5



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N-MeFOSE-d7_IS
Conc 5.0000
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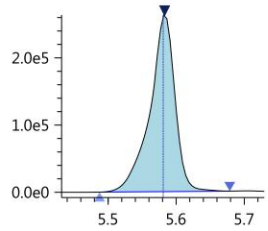
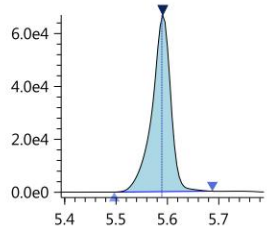
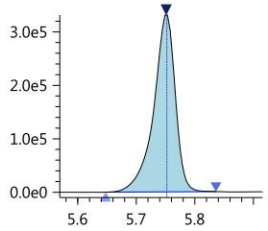
ISTD 622.70>59.10 (-) 2.64e5



N-MeFOSE
Conc 0.9125
RT 5.591 Area 168314
Q 616.00>59.00 (-) 6.70e4



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.751 Area 851297
ISTD 530.90>169.15 (-) 3.32e5



N-EtFOSA-d9
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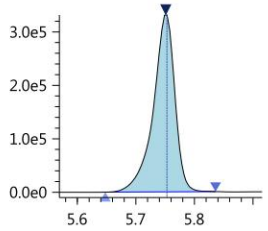
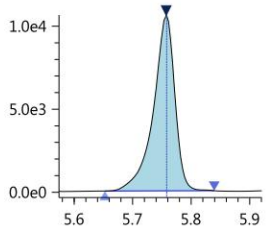
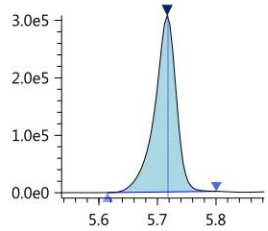
Q 530.90>169.15 (-) 3.32e5



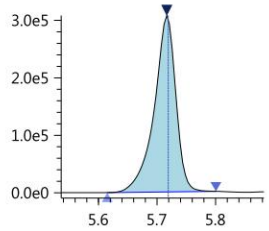
N-EtFOSA
Conc 0.9884
RT 5.757 Area 26897
Q 526.90>169.10 (-) 1.07e4



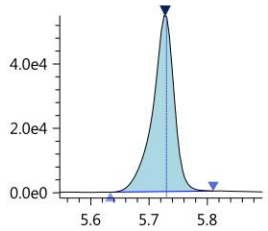
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.717 Area 787868
ISTD 638.70>59.10 (-) 3.08e5



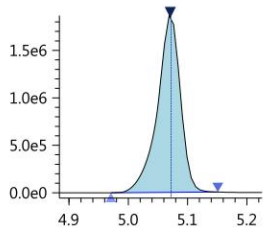
N-EtFOSE-d9
Conc 4.7757
RT 5.717 Area 787868
Q 638.70>59.10 (-) 3.08e5



N-EtFOSE
Conc 0.8673
RT 5.728 Area 140436
Q 630.00>58.90 (-) 5.51e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.071 Area 5035241
ISTD 570.00>525.00 (-) 1.87e6



190104_curve

010419_curve

ICAL Date: 1/4/2018
Cal. Std. xp: 3/12/2019
ICAL ID: KC1900007
LIMS ID:

1st Review: Chris Muller
2nd Review: JAN 0 8 2019
Column: LCMS06 -Shimadzu 8050
Phenomenex EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 18-OLC-02-64C **B:** 5mM Ammonium Acetate In MeOH 18-OLC-02-64D

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	IB	18-OLC-02-56N	010419_015	PFAS_121918_CM	1x	☒	
2	0.05 PPB ICAL	18-OLC-02-56F	010419_016	PFAS_121918_CM	1x	☒	
3	0.10 PPB ICAL	18-OLC-02-56G	010419_017	PFAS_121918_CM	1x	☒	
4	0.50 PPB ICAL	18-OLC-02-56H	010419_018	PFAS_121918_CM	1x	☒	
5	1.0 PPB ICAL	18-OLC-02-56I	010419_019	PFAS_121918_CM	1x	☒	
6	5.0 PPB ICAL	18-OLC-02-56J	010419_020	PFAS_121918_CM	1x	☒	
7	10.0 PPB ICAL	18-OLC-02-56K	010419_021	PFAS_121918_CM	1x	☒	
8	15.0 PPB ICAL	18-OLC-02-56L	010419_022	PFAS_121918_CM	1x	☒	
9	IB	18-OLC-02-56N	010419_023	PFAS_121918_CM	1x	☒	
10	1.0 PPB ICV	18-OLC-02-56M	010419_024	PFAS_121918_CM	1x	☒	
11	IB	18-OLC-02-56N	010419_025	PFAS_121918_CM	1x	☒	
12	T-PFOA	18-OLC-02-43M	010419_026	PFAS_121918_CM	1x	☒	

JAN 0 7 2019

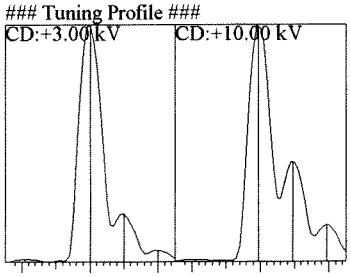
J:\LCMS06\Data\190104curve\010419_curve injection log

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

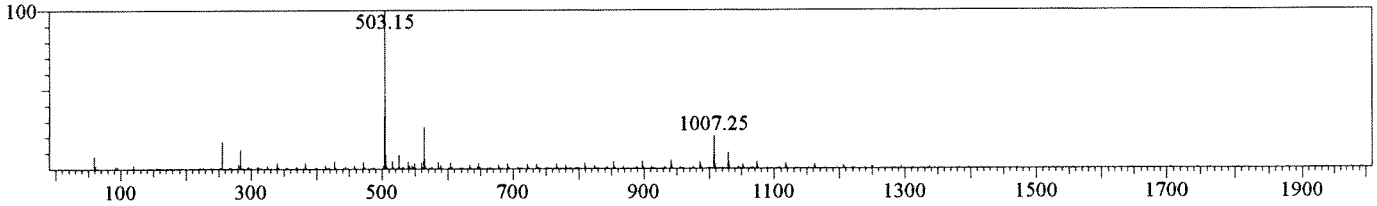
Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 1/4/2019 12:56:23 PM
Acquisition Mode: Q1 Scan(Use CID Gas)

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: 0.82 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 400(settings : 400) C
Q1 RF Gain: 5000
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: -2.00(-2.00) kV
PG Vacuum: 1.5e+002 Pa
IG Vacuum: 2.3e-003 Pa

Tuning Profile


Int.: 8927774 FWHM: 0.76 m/z : 503.15 Mag.: 2
Int.: 4106902 FWHM: 0.73 m/z : 1007.30 Mag.: 4

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	8927774
1007.30	1007.25	-0.05	0.73	4106902

DL0,5
cm
1/4/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+90.0	+130.0	+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

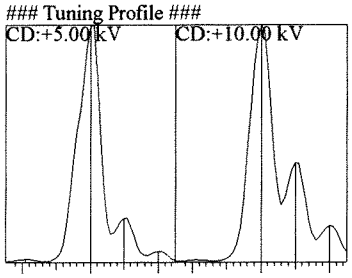
JAN 0 8 2019

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

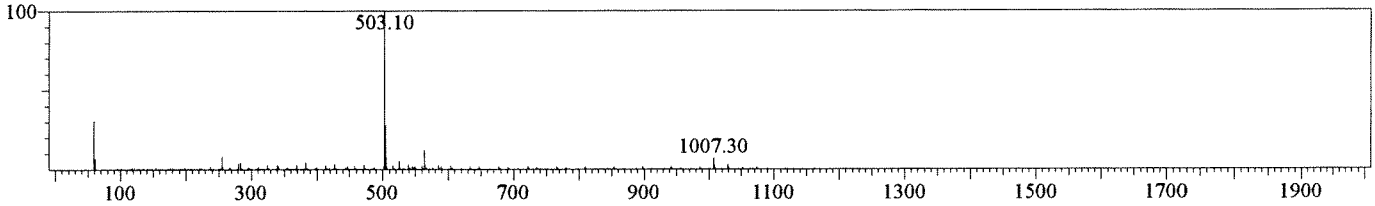
Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 1/4/2019 1:04:08 PM
Acquisition Mode: Q3 Scan(Use CID Gas)

Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 0.00(settings : 10.00) L/min
CID Gas Flow: 269(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.82 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: ---
Q1 RF Offset: ---
Q3 RF Gain: 5000
Q3 RF Offset: 5000
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: 3.5 V
Conversion Dynode: +10.00 kV
Detector: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.3e-003 Pa

Tuning Profile


Int.: 12729212 FWHM: 0.76 m/z : 503.15 Mag.: 1
Int.: 1430376 FWHM: 0.75 m/z : 1007.30 Mag.: 13

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	0.76	12729212
1007.30	1007.30	0.00	0.75	1430376

DL0.5
on 1/4/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+90.0	+130.0	+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

JAN 0 8 2019

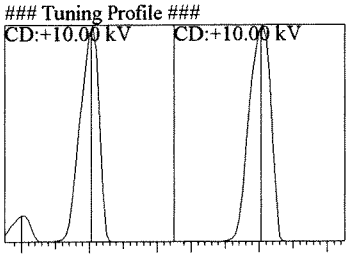
Sample Information
Sample Type: PEG+PPG+Raffinose

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: 1/4/2019 1:08:18 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: 269(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.86 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 5000
Q1 RF Offset: 5000
Q3 RF Gain: 5000
Q3 RF Offset: 5014
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: -0.5 V
Conversion Dynode: +10.00 kV
Detector: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.3e-003 Pa

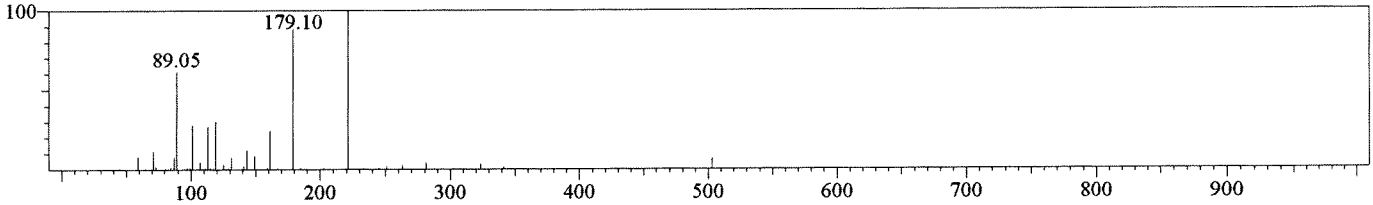
Tuning Profile



Int.: 1684818
FWHM: 0.64
m/z : 89.00
Pre m/z: 503.15
Mag.: 11

Int.: 2613401
FWHM: 0.75
m/z : 179.05
Pre m/z: 503.15
Mag.: 7

Scan Range: 2.00 - 553.15 Scan Speed: 30 u/s Base Peak: 221.10 (2864967) Pre m/z: 503.15



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15 > 89.00	89.05	0.05	0.64	1684818
503.15 > 179.05	179.10	0.05	0.75	2613401

0L0.5
dm 1/9/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+100.0	+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

JAN 0 8 2019

Insight Report

Printed at 1/7/2019 12:54:42 PM

Batch File: ----
Method File: J:\LCMS06\Data\190104curve\010419_curve.lcm
Project File: J:\LCMS06\Data\190104curve\010419_curve.damlp
Flags File: J:\LCMS06\Data\190104curve\010419_curve.damlp

010419_015

Sample ID: IB
Date acquired: 1/4/2019 4:55:39 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_015.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.324	2939746	2939746	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.324	2939746	4556234	26	5.0283	ng/mL	----
PFBA	ND(W/B)	----	----	2939746	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.920	1642042	1642042	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.920	1642042	4556234	26	5.0401	ng/mL	----
PFPeA	Auto	3.920	75555	1642042	4	0.0114	ng/mL	----
PFBS_1	Auto	3.970	110	920908	16	0.0006	ng/mL	----
PFBS-13C	Auto	3.975	920908	4556234	26	5.0506	ng/mL	----
PFBS-13C_IS	Auto	3.975	920908	920908	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.184	5414954	5414954	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.184	5414954	4556234	26	4.9773	ng/mL	----
PFHxA	M	4.188	4480	5414954	6	0.0026	ng/mL	----
HPFO_DA	ND(W/B)	----	----	969592	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.248	969592	969592	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.248	969592	4556234	26	5.0032	ng/mL	----
4_2-FTS-13C_IS	Auto	4.156	627133	627133	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.156	627133	4556234	26	5.6028	ng/mL	----
4_2-FTS_1	Auto	4.133	183	627133	5	0.0017	ng/mL	----
PFHpA	M	4.366	2011	3785714	8	0.0017	ng/mL	----
PFHpA-13C_IS	Auto	4.366	3785714	3785714	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.366	3785714	4556234	26	4.6387	ng/mL	----
PFHxS-18O_IS	Auto	4.363	554898	554898	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.363	554898	4556234	26	4.4112	ng/mL	----
PFHxS_1	Auto	4.364	843	554898	7	0.0079	ng/mL	----
6_2-FTS-13C	Auto	4.524	657756	4556234	26	5.8118	ng/mL	----
6_2-FTS-13C_IS	Auto	4.524	657756	657756	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.524	150	657756	10	0.0012	ng/mL	----
PFHpS_1	ND(W/B)	----	----	554898	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.533	5683545	5683545	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.533	5683545	4556234	26	5.2246	ng/mL	----
PFOA	M	4.534	9934	5683545	9	0.0100	ng/mL	----
PFOS_1	Auto	4.687	414	674212	13	0.0042	ng/mL	----
PFOS-13C_IS	Auto	4.689	674212	674212	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.689	674212	4556234	26	5.1353	ng/mL	----
PFNA-13C_IS	Auto	4.702	4398224	4398224	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.702	4398224	4556234	26	4.8591	ng/mL	----
PFNA	Auto	4.704	1478	4398224	11	0.0055	ng/mL	----
PFDA-13C_IS	Auto	4.886	4181627	4181627	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.886	4181627	4556234	26	5.2920	ng/mL	----
PFDA	M	4.849	2288	4181627	12	0.0033	ng/mL	----
8_2-FTS-13C_IS	Auto	4.884	506382	506382	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.884	506382	4556234	26	5.7533	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	506382	15	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	674212	13	----	ng/mL	----
PFUnA	M	5.070	8208	3674373	14	0.0135	ng/mL	----
PFUnA-13C_IS	Auto	5.070	3674373	3674373	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.070	3674373	4556234	26	4.9698	ng/mL	----
PFDoA	Auto	5.250	1664	5480573	17	0.0124	ng/mL	----
PFDoA-13C	Auto	5.249	5480573	4556234	26	5.1088	ng/mL	----
PFDoA-13C_IS	Auto	5.249	5480573	5480573	17	5.0000	ng/mL	----
10_2-FtS_1	M	5.257	20	506382	15	0.0003	ng/mL	----
PFTrDA	Auto	5.421	1459	3835963	22	0.0001	ng/mL	----
PFTeDA	Auto	5.572	26945	3835963	22	0.0031	ng/mL	----
PFTeDA-13C	Auto	5.573	3835963	4556234	26	4.9972	ng/mL	----
PFTeDA-13C_IS	Auto	5.573	3835963	3835963	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.221	1753144	1753144	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.221	1753144	4556234	26	5.0186	ng/mL	----
FOSA	Auto	5.224	364	1753144	18	0.0008	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	647434	19	----	ng/mL	----
N-MeFOSAA-d3	Auto	4.991	647434	4556234	26	4.6828	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.991	647434	647434	19	5.0000	ng/mL	----

Insight Report

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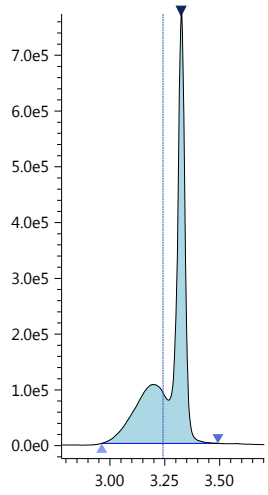
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSA-d3_IS	Auto	5.612	459923	459923	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.612	459923	4556234	26	4.6267	ng/mL	----
N-MeFOSA	Auto	5.616	853	459923	1	0.0070	ng/mL	----
N-MeFOSE-d7	Auto	5.583	676848	4556234	26	4.6872	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.583	676848	676848	20	5.0000	ng/mL	----
N-MeFOSE	M	5.589	124	676848	20	0.0006	ng/mL	----
N-EtFOSAA	Auto	5.117	223	664323	21	0.0326	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.088	664323	664323	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.088	664323	4556234	26	5.0050	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.750	803026	803026	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.750	803026	4556234	26	4.8177	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	803026	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.715	722987	722987	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.715	722987	4556234	26	4.6391	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	722987	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.069	4556234	4556234	26	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	920908	16	----	ng/mL	----
PFNS	M	4.841	34	674212	13	0.0004	ng/mL	----

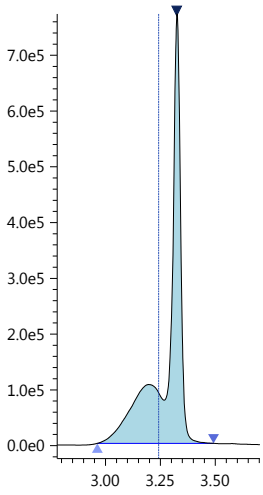
PFBA-13C_IS

Conc 5.0000
RT 3.324 Area 2939746
ISTD 216.90>172.15 (-) 7.74e5



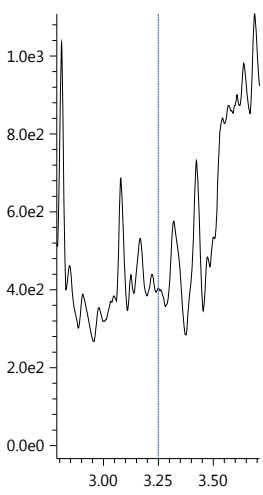
PFBA-13C

Conc 5.0283
RT 3.324 Area 2939746
Q 216.90>172.15 (-) 7.74e5



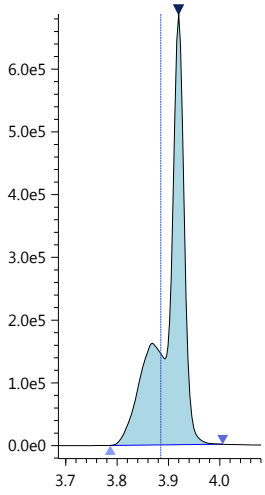
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.11e3



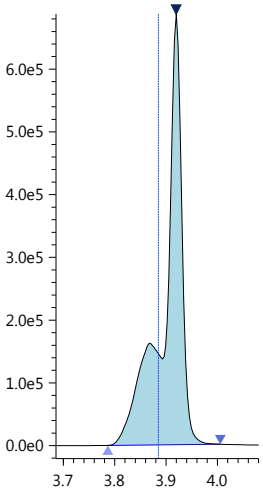
PFPeA-13C_IS

Conc 5.0000
RT 3.920 Area 1642042
ISTD 267.90>223.00 (-) 6.88e5



PFPeA-13C

Conc 5.0401
RT 3.920 Area 1642042
Q 267.90>223.00 (-) 6.88e5



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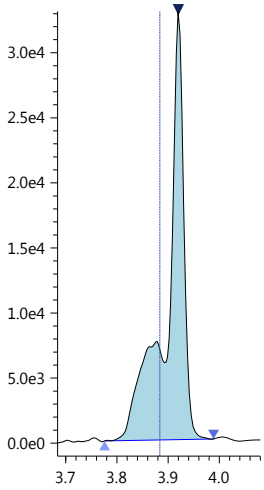
PFPeA

Conc 0.0114
RT 3.920 Area 75555

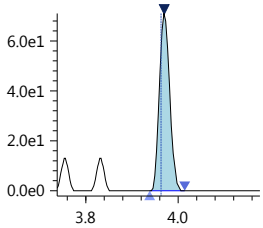
Q 263.05>219.10 (-) 3.32e4



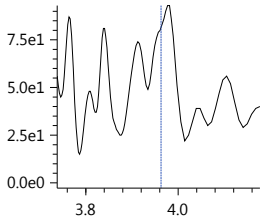
PFBS_1

Conc 0.0006
RT 3.970 Area 110
R#1 53.33 (0.00)

Q 299.00>80.00 (-) 7.10e1



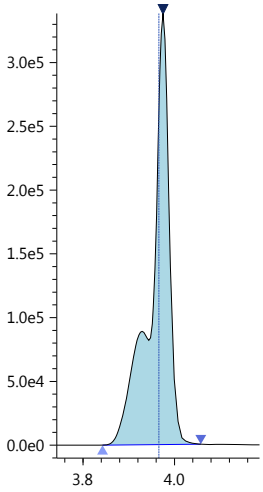
R1 298.80>99.00 (-) 9.30e1



PFBS-13C

Conc 5.0506
RT 3.975 Area 920908

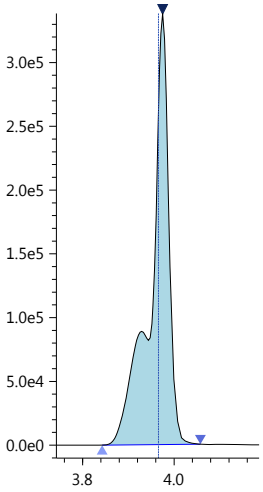
Q 301.80>80.00 (-) 3.38e5



PFBS-13C_IS

Conc 5.0000
RT 3.975 Area 920908

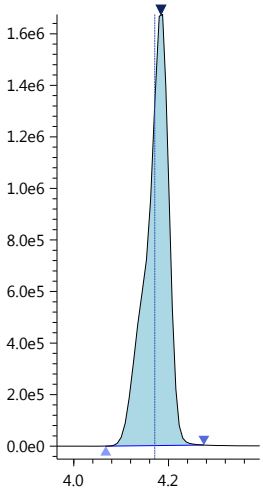
ISTD 301.80>80.00 (-) 3.38e5



PFHxA-13C_IS

Conc 5.0000
RT 4.184 Area 5414954

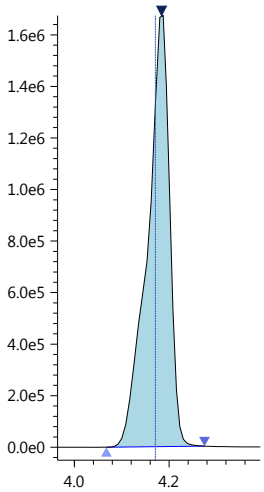
ISTD 314.90>270.10 (-) 1.67e6



PFHxA-13C

Conc 4.9773
RT 4.184 Area 5414954

Q 314.90>270.10 (-) 1.67e6

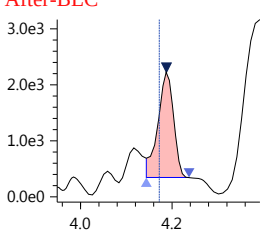


PFHxA

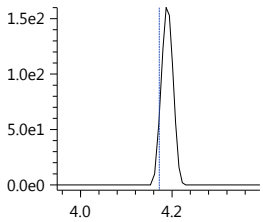
Conc 0.0026
RT 4.188 Area 4480
R#1 9.36 (0.00)

Q 313.00>269.00 (-) 3.17e3

After-BLC



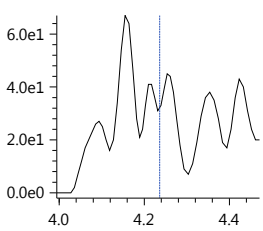
R1 313.00>119.10 (-) 1.60e2



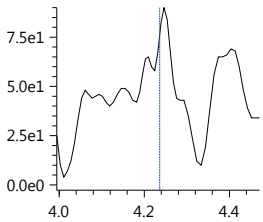
HPFO_DA

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

Q 329.00>169.00 (-) 6.70e1



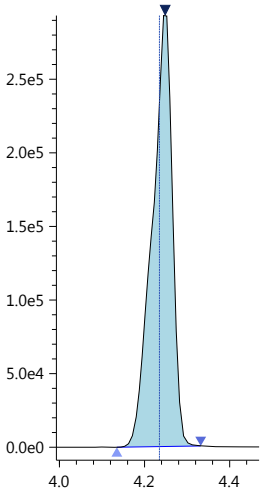
R1 329.00>285.10 (-) 9.00e1



HFPO_DA-13C_IS

Conc 5.0000
RT 4.248 Area 969592

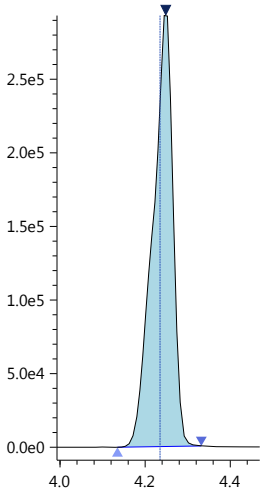
ISTD 332.00>286.80 (-) 2.93e5



HFPO_DA-13C

Conc 5.0032
RT 4.248 Area 969592

Q 332.00>286.80 (-) 2.93e5



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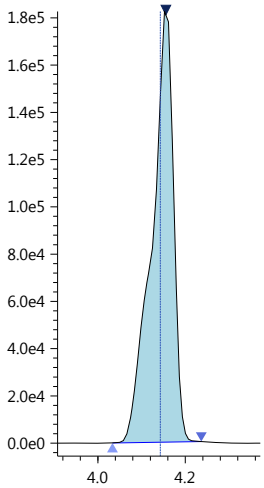
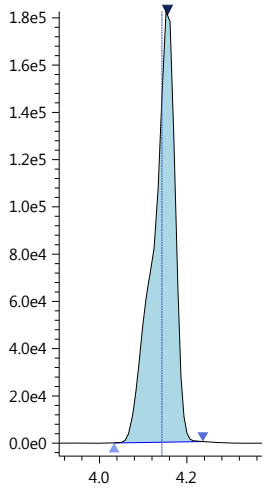
4_2-FTS-13C_IS
Conc 5.0000
RT 4.156 Area 627133

ISTD 328.80>309.05 (-) 1.83e5



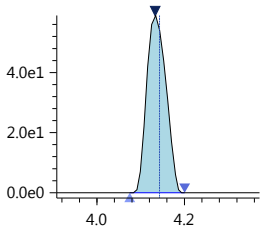
4_2-FTS-13C
Conc 5.6028
RT 4.156 Area 627133

Q 328.80>309.05 (-) 1.83e5

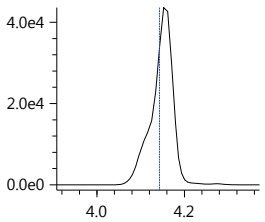


4_2-FTS_1
Conc 0.0017
RT 4.133 Area 183
R#1 37893.22 (0.00)

Q 327.00>307.05 (-) 5.90e1



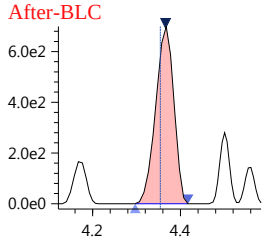
R1 327.00>81.10 (-) 4.36e4



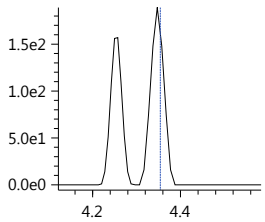
PFHpA
Conc 0.0017
RT 4.366 Area 2011
R#1 10.77 (0.00)

Q 362.90>319.00 (-) 6.99e2

After-BLC

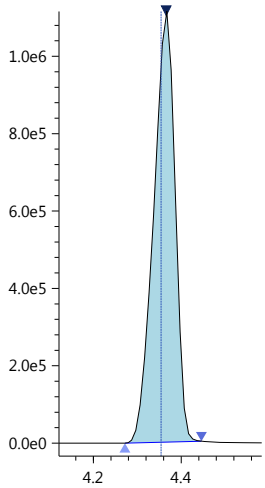


R1 362.90>169.00 (-) 1.89e2



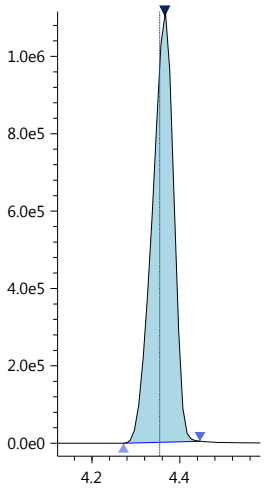
PFHpA-13C_IS
Conc 5.0000
RT 4.366 Area 3785714

ISTD 366.90>322.10 (-) 1.12e6



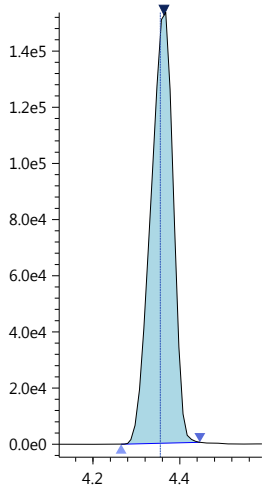
PFHpA-13C
Conc 4.6387
RT 4.366 Area 3785714

Q 366.90>322.10 (-) 1.12e6



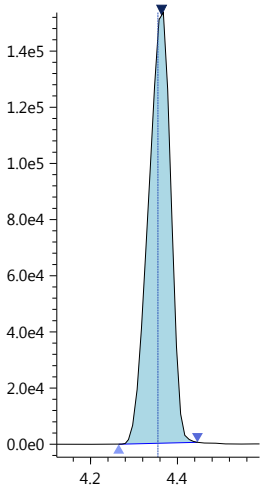
PFHxS-18O_IS
Conc 5.0000
RT 4.363 Area 554898

ISTD 402.70>84.05 (-) 1.54e5



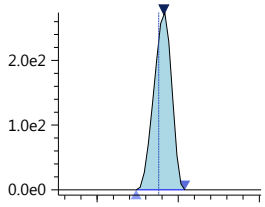
PFHxS-18O
Conc 4.4112
RT 4.363 Area 554898

Q 402.70>84.05 (-) 1.54e5

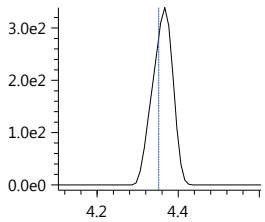


PFHxS_1
Conc 0.0079
RT 4.364 Area 843
R#1 122.93 (0.00)

Q 399.00>80.00 (-) 2.74e2

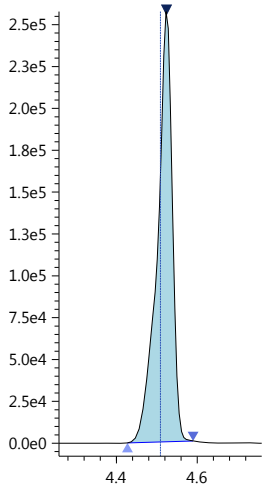


R1 399.00>99.00 (-) 3.39e2



6_2-FTS-13C
Conc 5.8118
RT 4.524 Area 657756

Q 428.90>409.00 (-) 2.58e5



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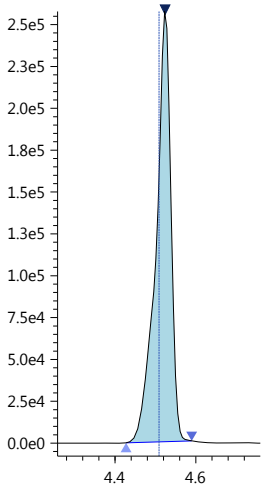
6_2-FTS-13C_IS

Conc 5.0000
RT 4.524 Area 657756

ISTD 428.90>409.00 (-) 2.58e5

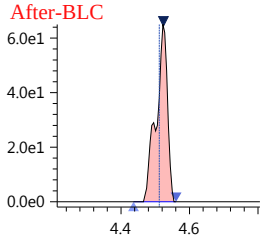


6_2-FTS_1

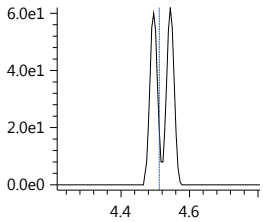
Conc 0.0012
RT 4.524 Area 150
R#1 0.00 (0.00)

Q 427.00>407.00 (-) 6.50e1

After-BLC



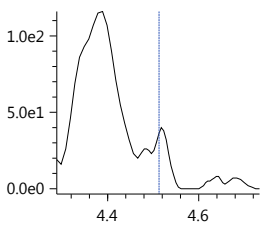
R1 427.00>80.90 (-) 6.20e1



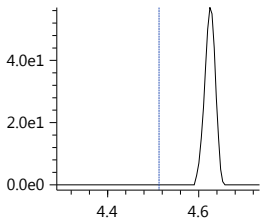
PFHpS_1

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

Q 449.00>80.15 (-) 1.16e2



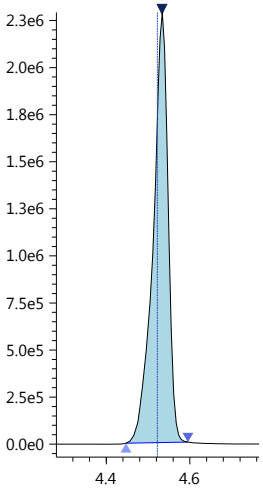
R1 449.00>99.20 (-) 5.70e1



PFOA-13C_IS

Conc 5.0000
RT 4.533 Area 5683545

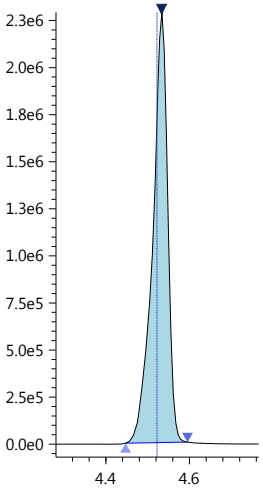
ISTD 416.80>372.05 (-) 2.29e6



PFOA-13C

Conc 5.2246
RT 4.533 Area 5683545

Q 416.80>372.05 (-) 2.29e6

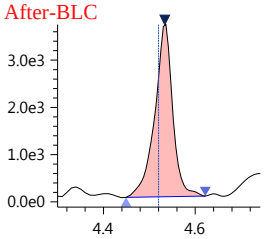


PFOA

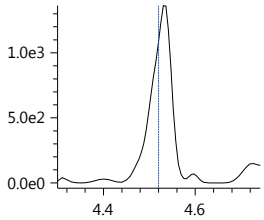
Conc 0.0100
RT 4.534 Area 9934
R#1 36.46 (0.00)

Q 413.00>369.00 (-) 3.75e3

After-BLC



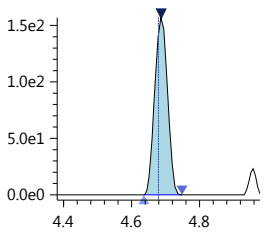
R1 413.00>169.10 (-) 1.36e3



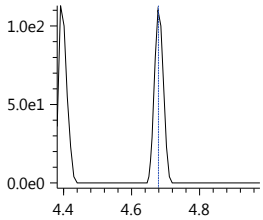
PFOS_1

Conc 0.0042
RT 4.687 Area 414
R#1 61.78 (0.00)

Q 499.00>80.00 (-) 1.57e2



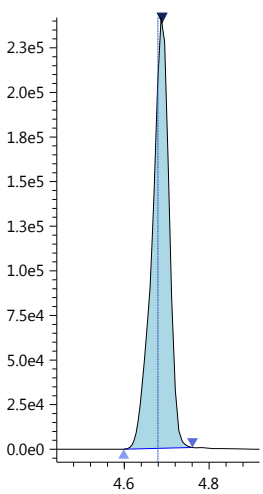
R1 499.00>99.00 (-) 1.13e2



PFOS-13C_IS

Conc 5.0000
RT 4.689 Area 674212

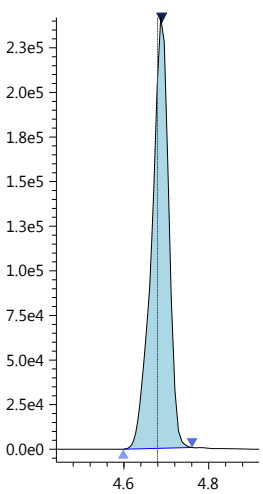
ISTD 502.80>80.05 (-) 2.42e5



PFOS-13C

Conc 5.1353
RT 4.689 Area 674212

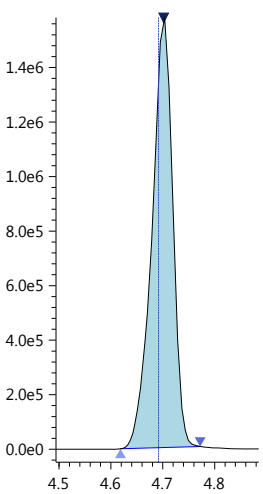
Q 502.80>80.05 (-) 2.42e5



PFNA-13C_IS

Conc 5.0000
RT 4.702 Area 4398224

ISTD 467.80>423.00 (-) 1.58e6



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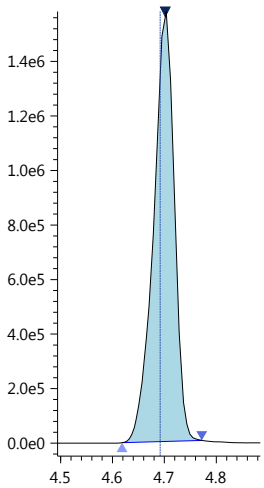
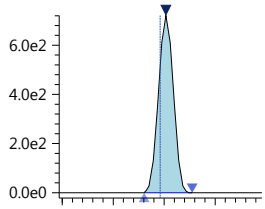
PFNA-13C
Conc 4.8591
RT 4.702 Area 4398224

Q 467.80>423.00 (-) 1.58e6

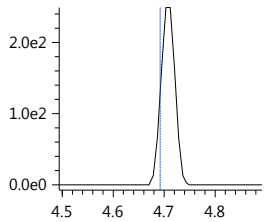


PFNA
Conc 0.0055
RT 4.704 Area 1478
R#1 34.23 (0.00)

Q 463.00>418.90 (-) 7.21e2

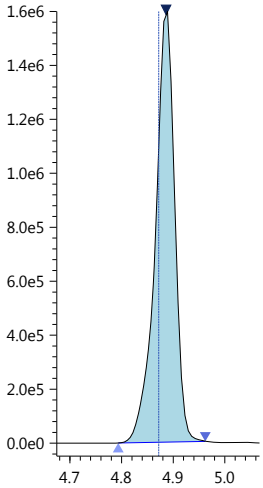


R1 463.00>219.00 (-) 2.49e2



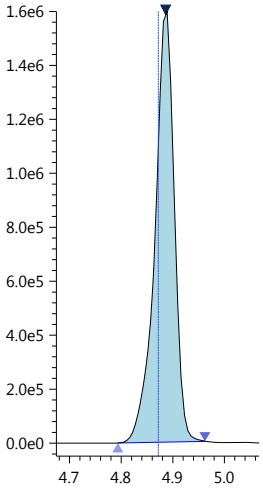
PFDA-13C_IS
Conc 5.0000
RT 4.886 Area 4181627

ISTD 514.80>469.95 (-) 1.60e6



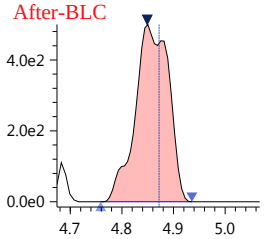
PFDA-13C
Conc 5.2920
RT 4.886 Area 4181627

Q 514.80>469.95 (-) 1.60e6

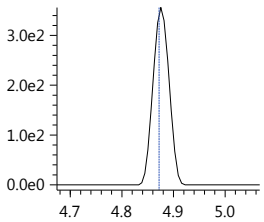


PFDA
Conc 0.0033
RT 4.849 Area 2288
R#1 11.74 (0.00)

Q 513.00>468.80 (-) 5.00e2

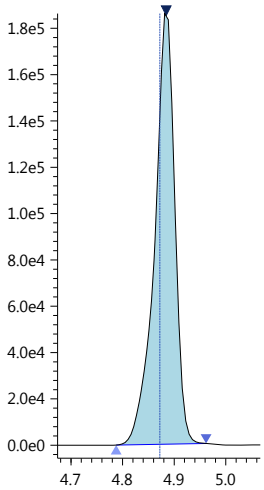


R1 513.00>219.10 (-) 3.56e2



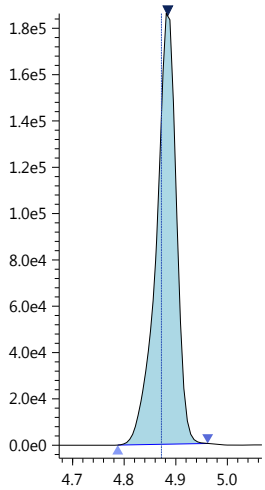
8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 506382

ISTD 528.80>509.00 (-) 1.86e5



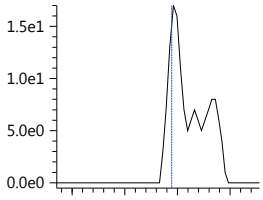
8_2-FTS-13C
Conc 5.7533
RT 4.884 Area 506382

Q 528.80>509.00 (-) 1.86e5

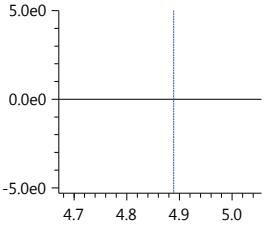


8_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 527.10>506.90 (-) 1.70e1

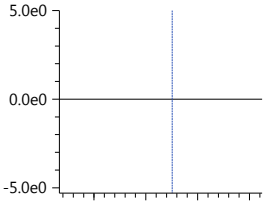


R1 527.20>487.00 (-) 0.00e0

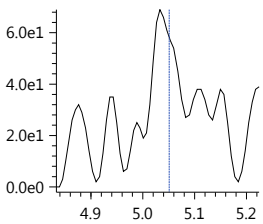


PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 599.00>79.90 (-) 0.00e0

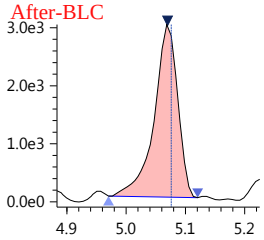


R1 599.00>99.10 (-) 6.90e1

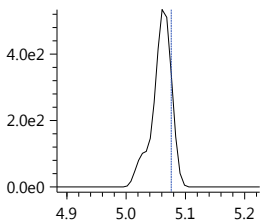


PFUnA
Conc 0.0135
RT 5.070 Area 8208
R#1 17.72 (0.00)

Q 563.00>518.90 (-) 3.06e3



R1 563.00>219.00 (-) 5.34e2



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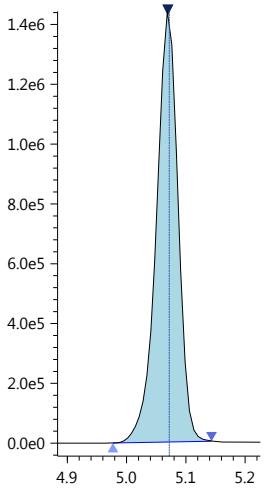
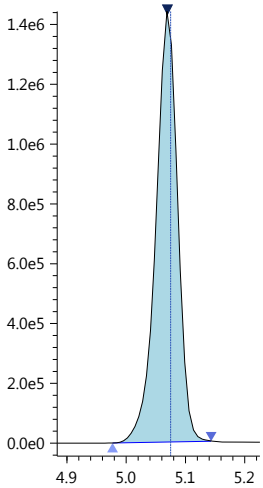
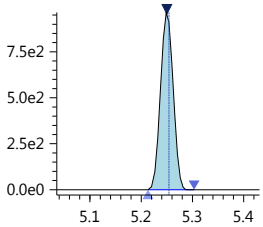
PFUnA-13C_IS
Conc 5.0000
RT 5.070 Area 3674373
ISTD 564.80>519.95 (-) 1.44e6



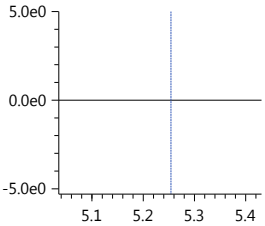
PFUnA-13C
Conc 4.9698
RT 5.070 Area 3674373
Q 564.80>519.95 (-) 1.44e6



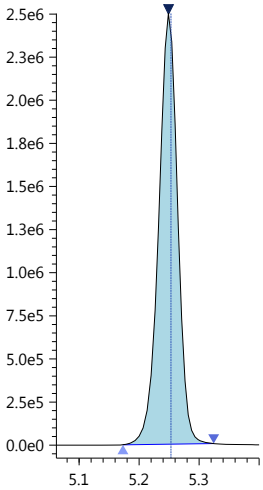
PFDoA
Conc 0.0124
RT 5.250 Area 1664
R#1 0.00 (0.00)
Q 613.05>569.00 (-) 9.64e2



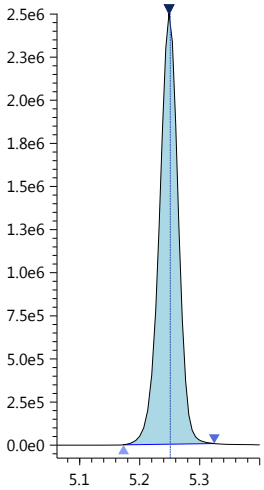
R1 613.05>169.00 (-) 0.00e0



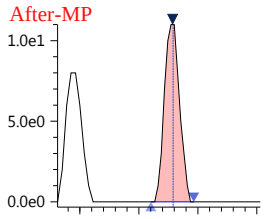
PFDoA-13C
Conc 5.1088
RT 5.249 Area 5480573
Q 614.80>569.95 (-) 2.50e6



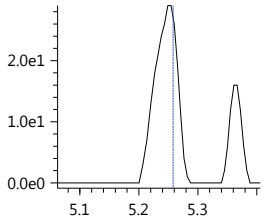
PFDoA-13C_IS
Conc 5.0000
RT 5.249 Area 5480573
ISTD 614.80>569.95 (-) 2.50e6



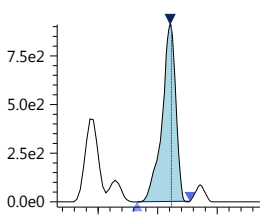
10_2-FtS_1
Conc 0.0003
RT 5.257 Area 20
R#1 184.62 (0.00)
Q 627.00>606.95 (-) 1.10e1



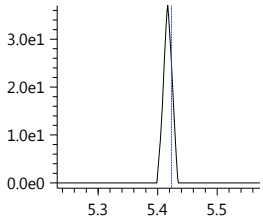
R1 627.00>81.25 (-) 2.90e1



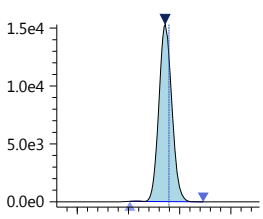
PFTrDA
Conc 0.0001
RT 5.421 Area 1459
R#1 2.01 (0.00)
Q 663.00>618.90 (-) 9.11e2



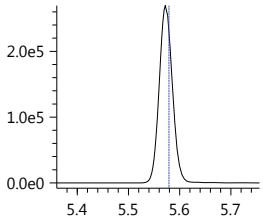
R1 662.90>169.00 (-) 3.70e1



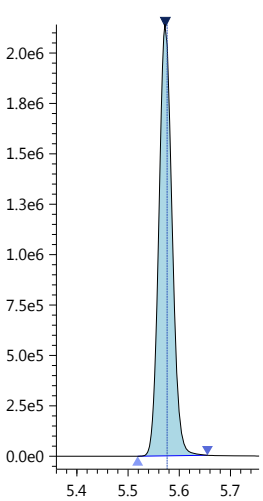
PFTeDA
Conc 0.0031
RT 5.572 Area 26945
R#1 1747.20 (0.00)
Q 713.40>669.00 (-) 1.53e4



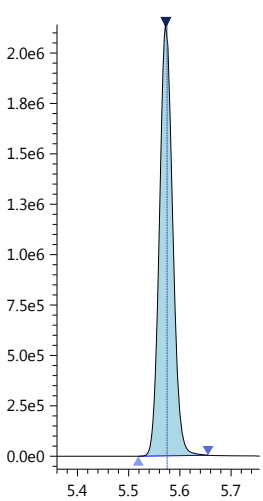
R1 713.40>169.10 (-) 2.70e5



PFTeDA-13C
Conc 4.9972
RT 5.573 Area 3835963
Q 714.70>669.90 (-) 2.14e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.573 Area 3835963
ISTD 714.70>669.90 (-) 2.14e6



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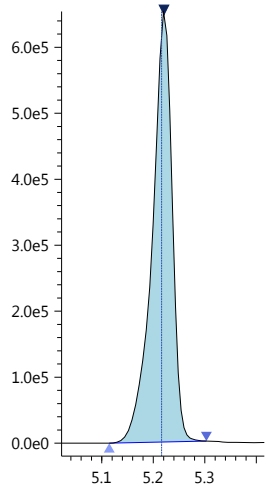
FOSA-13C_IS

Conc 5.0000
RT 5.221 Area 1753144

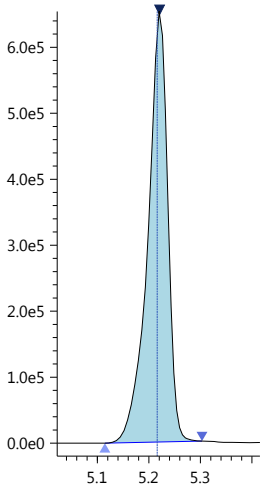
ISTD 506.00>78.05 (-) 6.54e5



FOSA-13C

Conc 5.0186
RT 5.221 Area 1753144

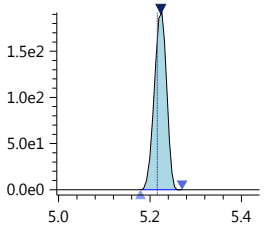
Q 506.00>78.05 (-) 6.54e5



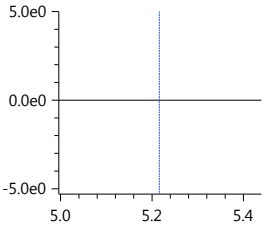
FOSA

Conc 0.0008
RT 5.224 Area 364
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 1.92e2



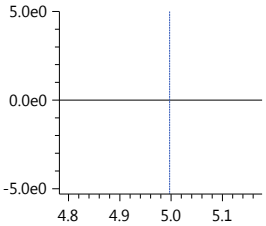
R1 498.20>64.10 (-) 0.00e0



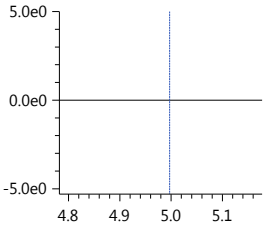
N-MeFOSAA

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

Q 570.20>419.00 (-) 0.00e0



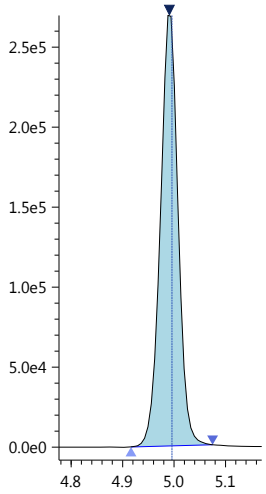
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 4.6828
RT 4.991 Area 647434

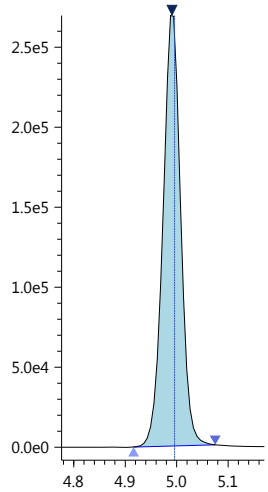
Q 572.80>419.05 (-) 2.70e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 4.991 Area 647434

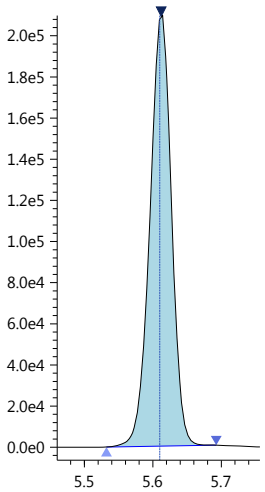
ISTD 572.80>419.05 (-) 2.70e5



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.612 Area 459923

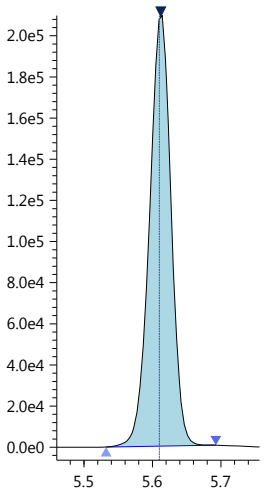
ISTD 514.90>168.90 (-) 2.10e5



N-MeFOSA-d3

Conc 4.6267
RT 5.612 Area 459923

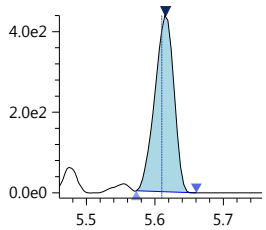
Q 514.90>168.90 (-) 2.10e5



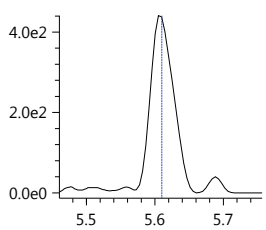
N-MeFOSA

Conc 0.0070
RT 5.616 Area 853
R#1 83.23 (0.00)

Q 512.00>169.10 (-) 4.40e2



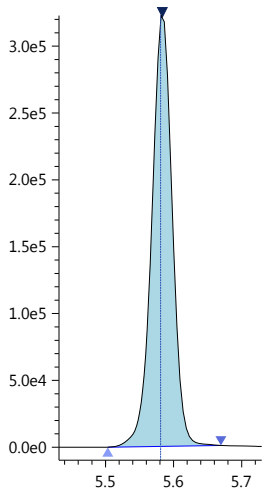
R1 512.00>219.00 (-) 4.41e2



N-MeFOSE-d7

Conc 4.6872
RT 5.583 Area 676848

Q 622.70>59.10 (-) 3.23e5



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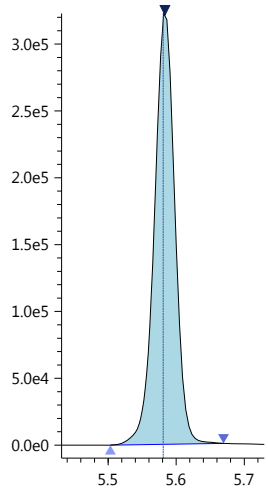
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.583 Area 676848

ISTD 622.70>59.10 (-) 3.23e5

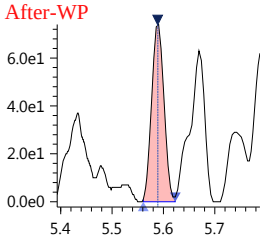


N-MeFOSE

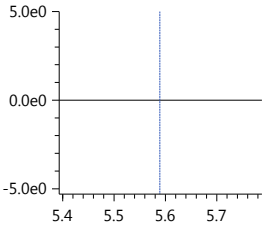
Conc 0.0006
RT 5.589 Area 124
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 7.40e1

After-WP



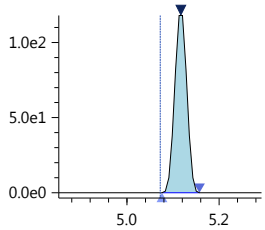
R1 556.00>121.20 (-) 0.00e0



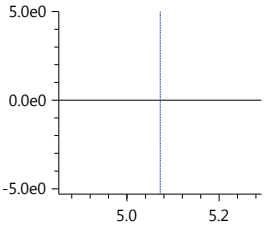
N-EtFOSAA

Conc 0.0326
RT 5.117 Area 223
R#1 0.00 (0.00)

Q 584.20>418.95 (-) 1.18e2



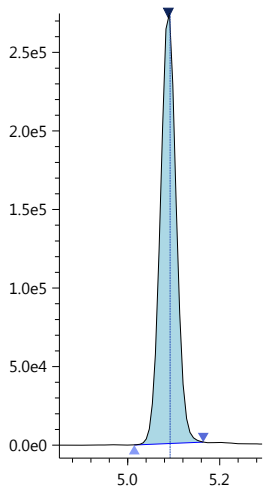
R1 584.20>526.10 (-) 0.00e0



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.088 Area 664323

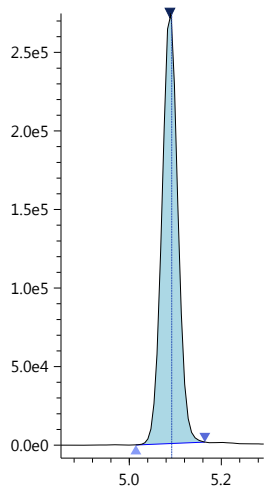
ISTD 588.80>419.00 (-) 2.75e5



N-EtFOSAA-d5

Conc 5.0050
RT 5.088 Area 664323

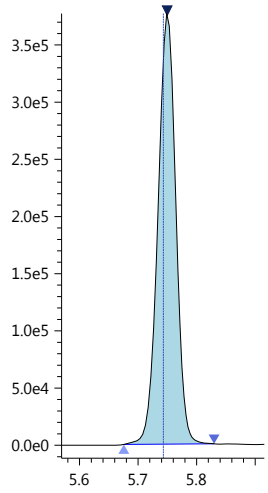
Q 588.80>419.00 (-) 2.75e5



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.750 Area 803026

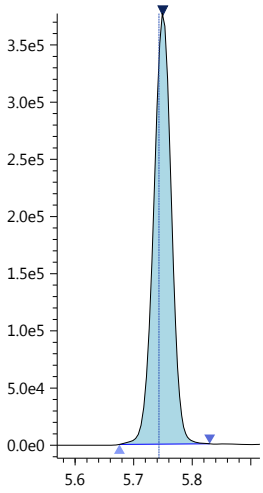
ISTD 530.90>169.15 (-) 3.77e5



N-EtFOSA-d9

Conc 4.8177
RT 5.750 Area 803026

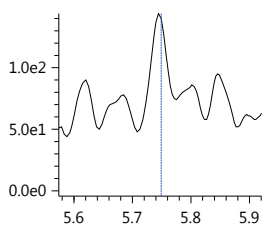
Q 530.90>169.15 (-) 3.77e5



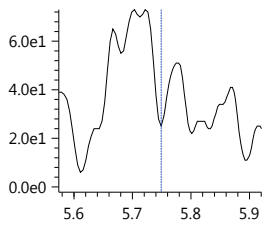
N-EtFOSA

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

Q 526.90>169.10 (-) 1.44e2



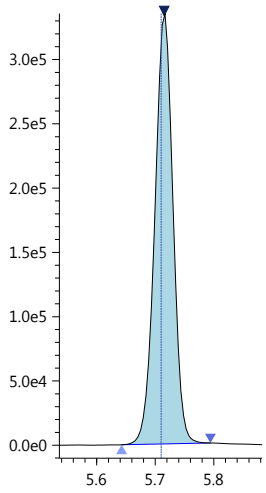
R1 526.90>219.00 (-) 7.30e1



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.715 Area 722987

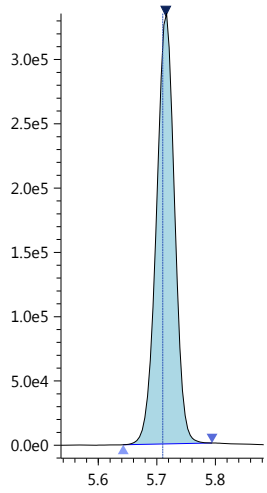
ISTD 638.70>59.10 (-) 3.36e5



N-EtFOSE-d9

Conc 4.6391
RT 5.715 Area 722987

Q 638.70>59.10 (-) 3.36e5



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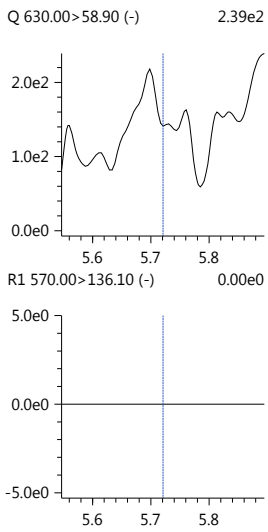
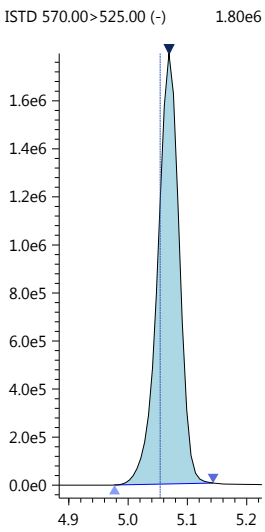
N-EtFOSE

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



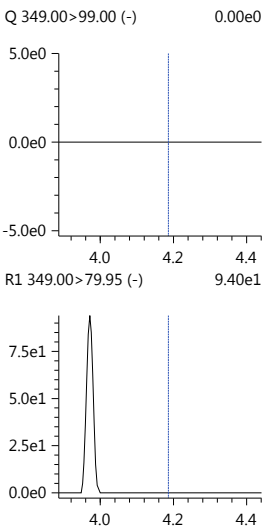
13C7-PFUnDA_IS

Conc 5.0000
RT 5.069 Area 4556234



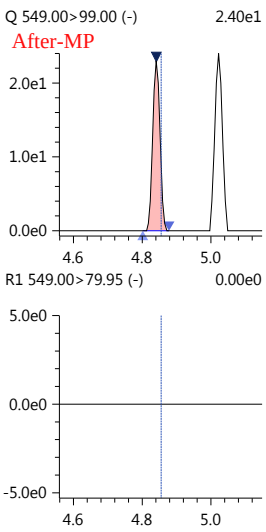
PFPeS

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



PFNS

Conc 0.0004
RT 4.841 Area 34
R#1 0.00 (0.00)



Insight Report

Printed at 1/7/2019 10:13:37 AM

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Project File: J:\LCMS06\Data\190104curve\010419_curve.damlp
Flags File: J:\LCMS06\Data\190104curve\010419_curve.damlp

010419_015

Sample ID: IB
Date acquired: 1/4/2019 4:55:39 PM
Acquired by: System Administrator
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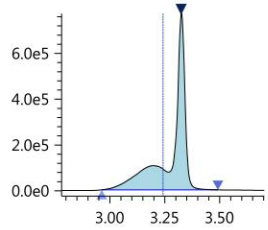
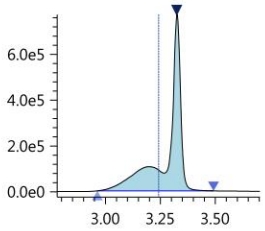
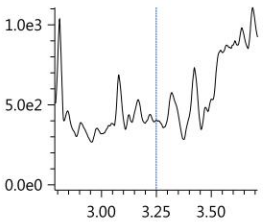
PFBA-13C_IS
Conc 5.0000
RT 3.324 Area 2939746
ISTD 216.90>172.15 (-) 7.74e5



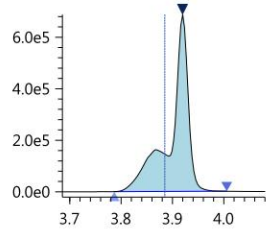
PFBA-13C
Conc 5.0283
RT 3.324 Area 2939746
Q 216.90>172.15 (-) 7.74e5



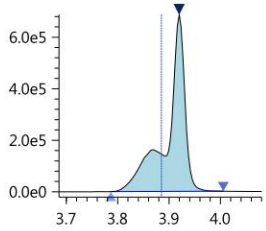
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.11e3



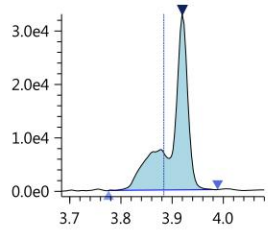
PFPeA-13C_IS
Conc 5.0000
RT 3.920 Area 1642042
ISTD 267.90>223.00 (-) 6.88e5



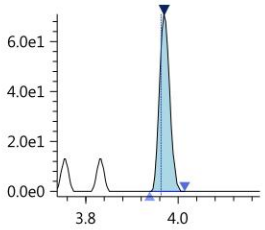
PFPeA-13C
Conc 5.0401
RT 3.920 Area 1642042
Q 267.90>223.00 (-) 6.88e5



PFPeA
Conc 0.0672
RT 3.920 Area 75555
Q 263.05>219.10 (-) 3.32e4



PFBS_1
Conc 0.0006
RT 3.970 Area 110
Q 299.00>80.00 (-) 7.10e1



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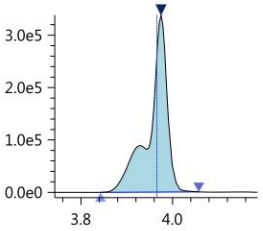
Conc 5.0506
RT 3.975 Area 920908
Q 301.80>80.00 (-) 3.38e5



PFBS-13C_IS
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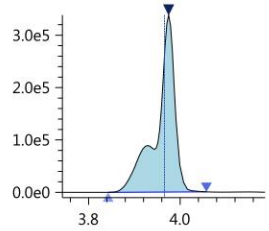
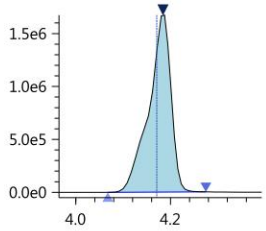
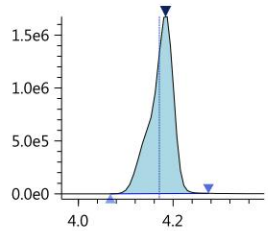
ISTD 301.80>80.00 (-) 3.38e5



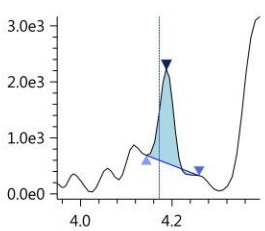
PFHxA-13C_IS
Conc 5.0000
RT 4.184 Area 5414954
ISTD 314.90>270.10 (-) 1.67e6



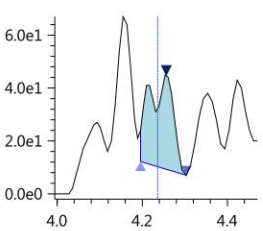
PFHxA-13C
Conc 4.9773
RT 4.184 Area 5414954
Q 314.90>270.10 (-) 1.67e6



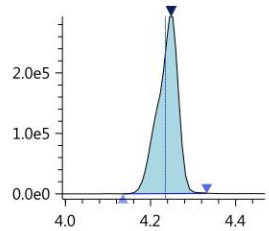
PFHxA
Conc 0.0035
RT 4.188 Area 3347
Q 313.00>269.00 (-) 3.17e3



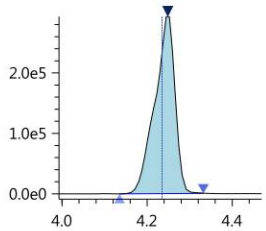
HPFO_DA
Conc 0.0008
RT 4.256 Area 139
Q 329.00>169.00 (-) 6.70e1



HFPO_DA-13C_IS
Conc 5.0000
RT 4.248 Area 969592
ISTD 332.00>286.80 (-) 2.93e5



HFPO_DA-13C
Conc 5.0032
RT 4.248 Area 969592
Q 332.00>286.80 (-) 2.93e5



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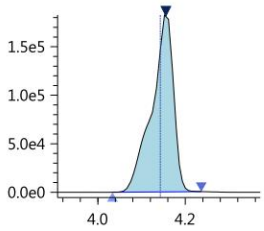
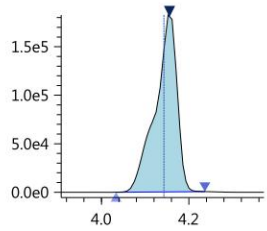
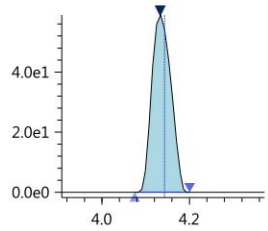
4_2-FTS-13C_IS
Conc 5.0000
RT 4.156 Area 627133
ISTD 328.80>309.05 (-) 1.83e5



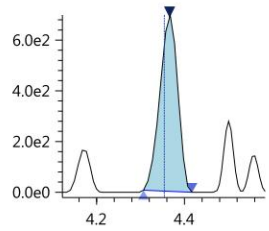
4_2-FTS-13C
Conc 5.6028
RT 4.156 Area 627133
Q 328.80>309.05 (-) 1.83e5



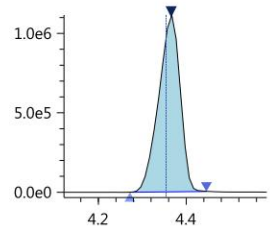
4_2-FTS_1
Conc 0.0018
RT 4.133 Area 183
Q 327.00>307.05 (-) 5.90e1



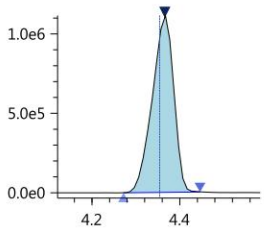
PFHpA
Conc 0.0024
RT 4.366 Area 1982
Q 362.90>319.00 (-) 6.99e2



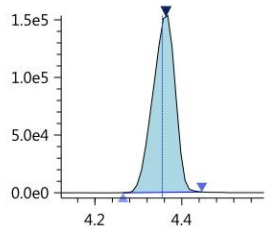
PFHpA-13C_IS
Conc 5.0000
RT 4.366 Area 3785714
ISTD 366.90>322.10 (-) 1.12e6



PFHpA-13C
Conc 4.6387
RT 4.366 Area 3785714
Q 366.90>322.10 (-) 1.12e6



PFHxS-18O_IS
Conc 5.0000
RT 4.363 Area 554898
ISTD 402.70>84.05 (-) 1.54e5



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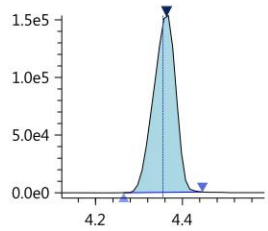
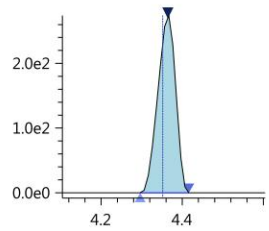
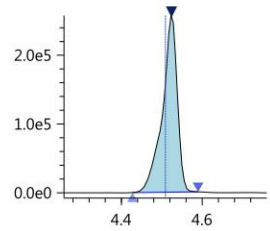
Conc 4.4112
RT 4.363 Area 554898
Q 402.70>84.05 (-) 1.54e5



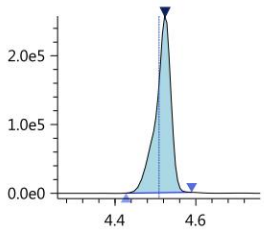
PFHxS_1
Conc 0.0079
RT 4.364 Area 843
Q 399.00>80.00 (-) 2.74e2



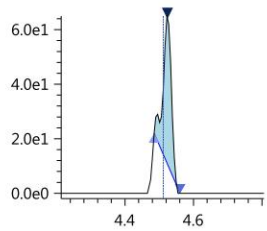
6_2-FTS-13C
Conc 5.8118
RT 4.524 Area 657756
Q 428.90>409.00 (-) 2.58e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.524 Area 657756
ISTD 428.90>409.00 (-) 2.58e5



6_2-FTS_1
Conc 0.0007
RT 4.524 Area 90
Q 427.00>407.00 (-) 6.50e1



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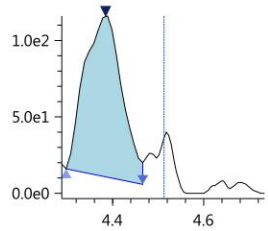
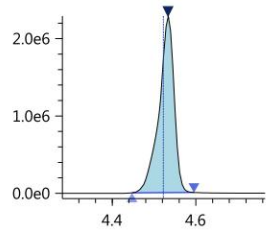
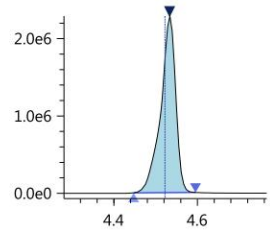
Conc 0.0054
RT 4.385 Area 603
Q 449.00>80.15 (-) 1.16e2



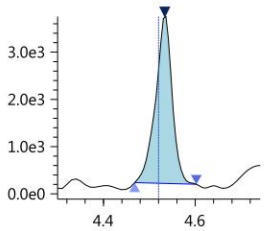
PFOA-13C_IS
Conc 5.0000
RT 4.533 Area 5683545
ISTD 416.80>372.05 (-) 2.29e6



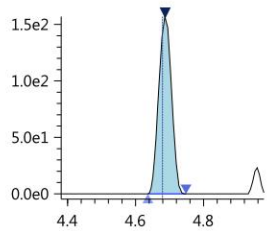
PFOA-13C
Conc 5.2246
RT 4.533 Area 5683545
Q 416.80>372.05 (-) 2.29e6



PFOA
Conc 0.0095
RT 4.534 Area 8926
Q 413.00>369.00 (-) 3.75e3



PFOS_1
Conc 0.0043
RT 4.687 Area 414
Q 499.00>80.00 (-) 1.57e2



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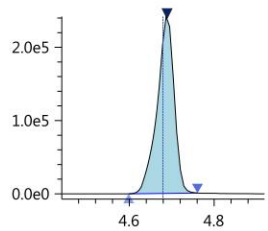
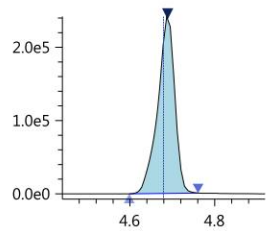
Conc 5.0000
RT 4.689 Area 674212
ISTD 502.80>80.05 (-) 2.42e5



PFOS-13C
Conc 5.1353
RT 4.689 Area 674212
Q 502.80>80.05 (-) 2.42e5



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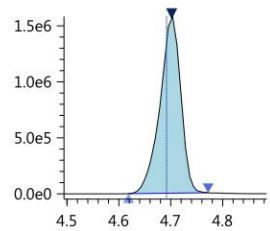
Conc 5.0000
RT 4.702 Area 4398224
ISTD 467.80>423.00 (-) 1.58e6



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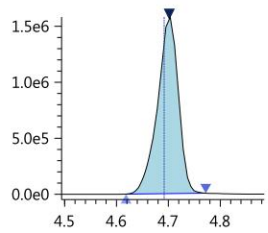
PFNA-13C
Conc 4.8591
RT 4.702 Area 4398224
Q 467.80>423.00 (-) 1.58e6



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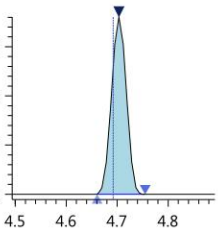
Conc 0.0026
RT 4.704 Area 1478
Q 463.00>418.90 (-) 7.21e2



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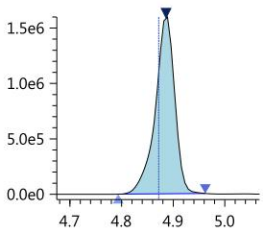
RT 4.886 Area 4181627
ISTD 514.80>469.95 (-) 1.60e6



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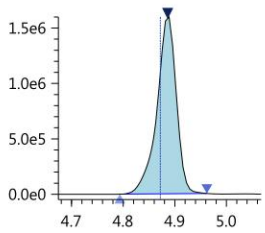
Conc 5.2920
RT 4.886 Area 4181627
Q 514.80>469.95 (-) 1.60e6



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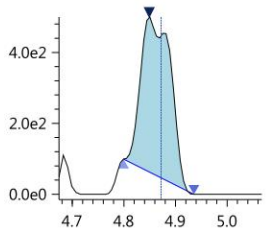
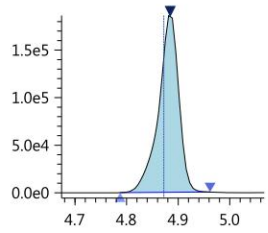
RT 4.849 Area 1795
Q 513.00>468.80 (-) 5.00e2



8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 506382
ISTD 528.80>509.00 (-) 1.86e5



8_2-FTS-13C
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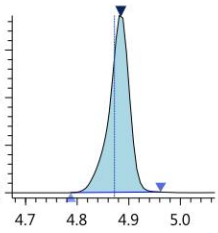
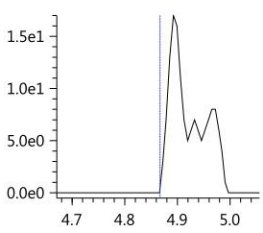
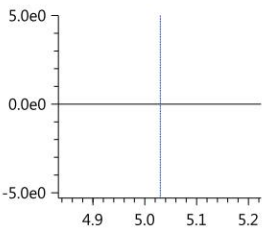
Q 528.80>509.00 (-) 1.86e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.70e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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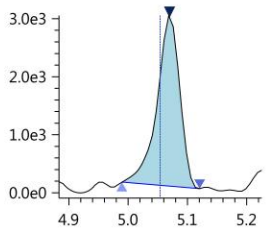
Q 563.00>518.90 (-) 3.06e3



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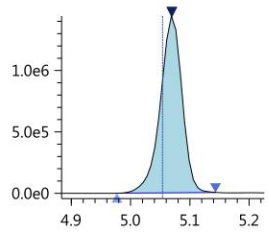
ISTD 564.80>519.95 (-) 1.44e6



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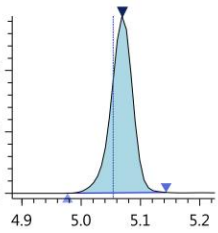
Q 564.80>519.95 (-) 1.44e6



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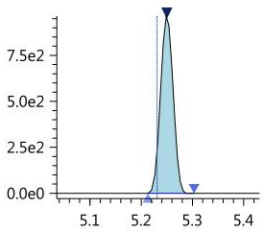
Conc 0.0029
RT 5.250 Area 1664
Q 613.05>569.00 (-) 9.64e2



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Conc 5.1088
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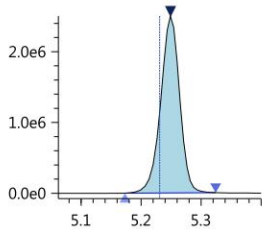
Q 614.80>569.95 (-) 2.50e6



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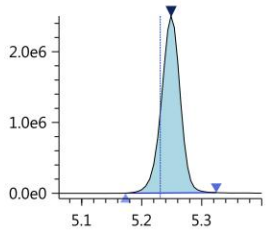
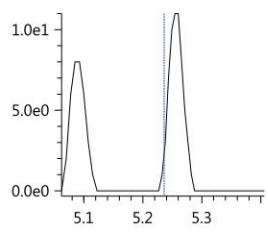
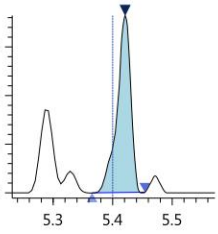
ISTD 614.80>569.95 (-) 2.50e6



10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.10e1



PFTrDA
Conc 0.0021
RT 5.421 Area 1459
Q 663.00>618.90 (-) 9.11e2



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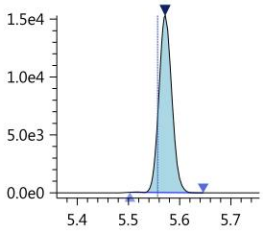
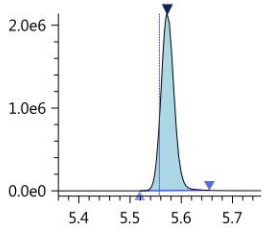
Conc 0.0747
RT 5.572 Area 26945
Q 713.40>669.00 (-) 1.53e4



PFTeDA-13C
Conc 4.9972
RT 5.573 Area 3835963
Q 714.70>669.90 (-) 2.14e6



PFTeDA-13C_IS
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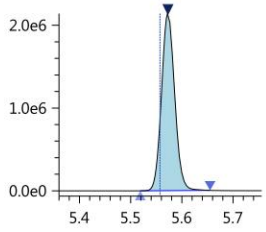
ISTD 714.70>669.90 (-) 2.14e6



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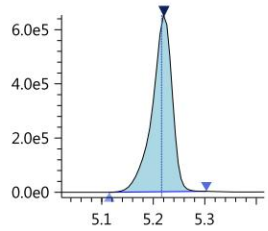
FOSA-13C_IS
Conc 5.0000
RT 5.221 Area 1753144
ISTD 506.00>78.05 (-) 6.54e5



FOSA-13C
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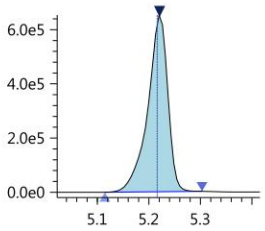
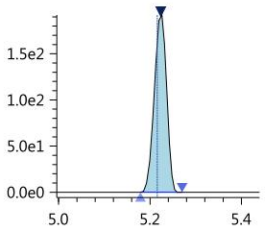
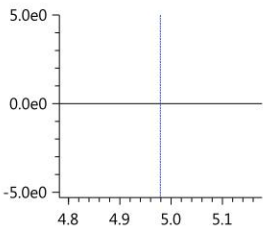
RT 5.221 Area 1753144
Q 506.00>78.05 (-) 6.54e5



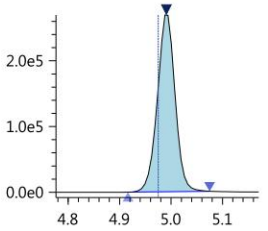
FOSA
Conc 0.0008
RT 5.224 Area 364
Q 498.20>78.00 (-) 1.92e2



N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



N-MeFOSAA-d3
Conc 4.6828
RT 4.991 Area 647434
Q 572.80>419.05 (-) 2.70e5



N-MeFOSAA-d3_IS
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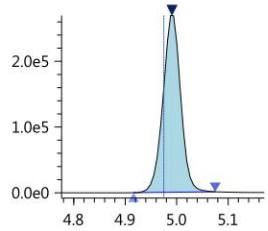
ISTD 572.80>419.05 (-) 2.70e5



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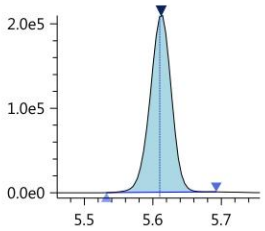
Conc 5.0000
RT 5.612 Area 459923
ISTD 514.90>168.90 (-) 2.10e5



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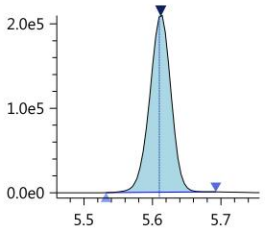
Conc 4.6267
RT 5.612 Area 459923
Q 514.90>168.90 (-) 2.10e5



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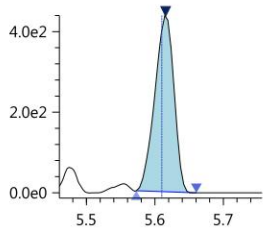
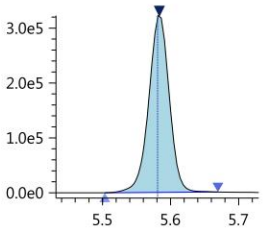
Conc 0.0070
RT 5.616 Area 853
Q 512.00>169.10 (-) 4.40e2



N-MeFOSE-d7
Conc 4.6872
RT 5.583 Area 676848
Q 622.70>59.10 (-) 3.23e5



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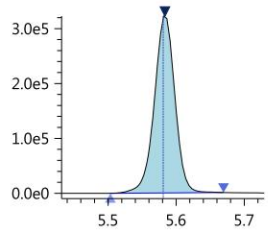
ISTD 622.70>59.10 (-) 3.23e5



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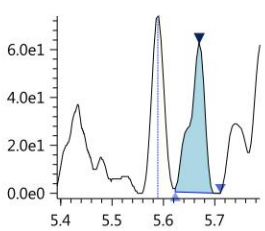
Conc 0.0006
RT 5.670 Area 125
Q 616.00>59.00 (-) 7.40e1



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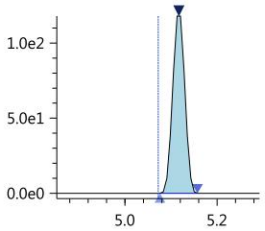
Conc 0.0045
RT 5.117 Area 223
Q 584.20>418.95 (-) 1.18e2



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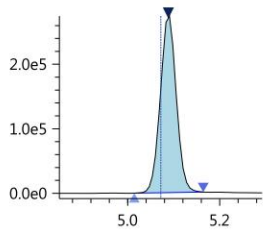
Conc 5.0000
RT 5.088 Area 664323
ISTD 588.80>419.00 (-) 2.75e5



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Conc 5.0050
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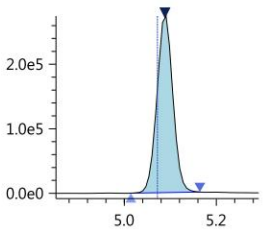
Q 588.80>419.00 (-) 2.75e5



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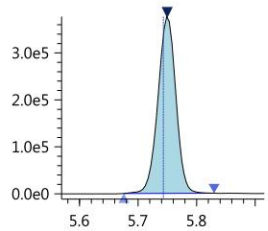
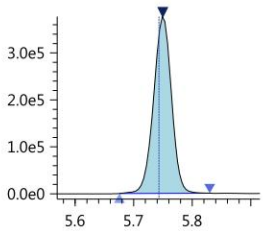
ISTD 530.90>169.15 (-) 3.77e5



N-EtFOSA-d9
Conc 4.8177
RT 5.750 Area 803026
Q 530.90>169.15 (-) 3.77e5



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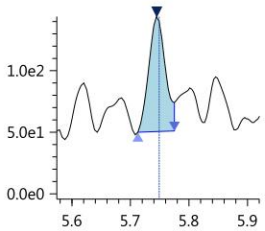
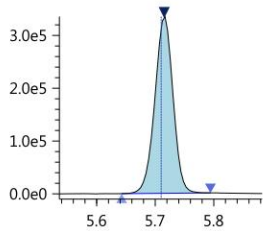
Conc 0.0067
RT 5.745 Area 185
Q 526.90>169.10 (-) 1.44e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.715 Area 722987
ISTD 638.70>59.10 (-) 3.36e5



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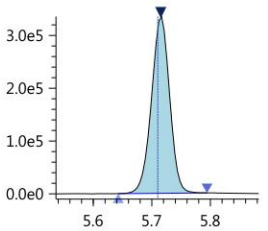
RT 5.715 Area 722987
Q 638.70>59.10 (-) 3.36e5



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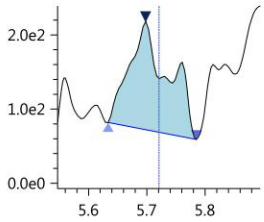
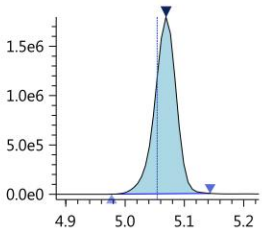
N-EtFOSE

Conc 0.0039
RT 5.698 Area 679
Q 630.00>58.90 (-) 2.39e2



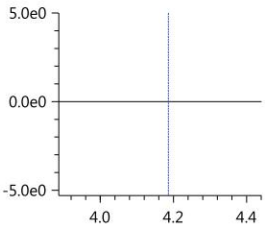
13C7-PFUnDA_IS

Conc 5.0000
RT 5.069 Area 4556234
ISTD 570.00>525.00 (-) 1.80e6



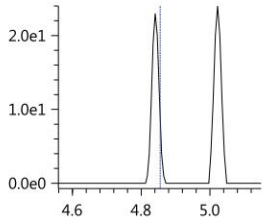
PFPeS

Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 0.00e0



PFNS

Conc ----
RT ---- Area ----
Q 549.00>99.00 (-) 2.40e1



Insight Report

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010419_016

Sample ID: 0.05 PPB ICAL
Date acquired: 1/4/2019 5:06:07 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_016.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.328	2908252	2908252	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.328	2908252	4861594	26	4.6620	ng/mL	5.0000
PFBA	M	3.329	26874	2908252	2	0.0524	ng/mL	0.0500
PFPeA-13C_IS	Auto	3.923	1643727	1643727	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.923	1643727	4861594	26	4.7284	ng/mL	5.0000
PFPeA	Auto	3.925	108187	1643727	4	0.0520	ng/mL	0.0500
PFBS_1	Auto	3.977	7438	931514	16	0.0392	ng/mL	0.0444
PFBS-13C	Auto	3.979	931514	4861594	26	4.7879	ng/mL	5.0000
PFBS-13C_IS	Auto	3.979	931514	931514	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.188	5767106	5767106	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.188	5767106	4861594	26	4.9680	ng/mL	5.0000
PFHxA	Auto	4.188	53959	5767106	6	0.0510	ng/mL	0.0500
HPFO_DA	Auto	4.253	8752	999669	3	0.0472	ng/mL	0.0500
HFPO_DA-13C_IS	Auto	4.254	999669	999669	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.254	999669	4861594	26	4.8344	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.159	546923	546923	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.159	546923	4861594	26	4.5793	ng/mL	5.0000
4_2-FTS_1	M	4.158	4981	546923	5	0.0527	ng/mL	0.0469
PFHpA	Auto	4.368	55495	4277512	8	0.0600	ng/mL	0.0500
PFHpA-13C_IS	Auto	4.369	4277512	4277512	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.369	4277512	4861594	26	4.9121	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.369	667721	667721	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.369	667721	4861594	26	4.9747	ng/mL	5.0000
PFHxS_1	M	4.368	5040	667721	7	0.0392	ng/mL	0.0457
6_2-FTS-13C	Auto	4.527	635948	4861594	26	5.2662	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.527	635948	635948	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.528	5777	635948	10	0.0492	ng/mL	0.0476
PFHpS_1	Auto	4.529	6047	667721	7	0.0449	ng/mL	0.0477
PFOA-13C_IS	Auto	4.537	5781750	5781750	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.537	5781750	4861594	26	4.9810	ng/mL	5.0000
PFOA	Auto	4.539	51364	5781750	9	0.0535	ng/mL	0.0500
PFOS_1	M	4.692	5174	646229	13	0.0543	ng/mL	0.0465
PFOS-13C_IS	Auto	4.692	646229	646229	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.692	646229	4861594	26	4.6130	ng/mL	5.0000
PFNA-13C_IS	Auto	4.706	4991222	4991222	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.706	4991222	4861594	26	5.1678	ng/mL	5.0000
PFNA	Auto	4.708	28771	4991222	11	0.0463	ng/mL	0.0500
PFDA-13C_IS	Auto	4.890	4232674	4232674	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.890	4232674	4861594	26	5.0201	ng/mL	5.0000
PFDA	Auto	4.891	36156	4232674	12	0.0510	ng/mL	0.0500
8_2-FTS-13C_IS	Auto	4.887	490145	490145	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.887	490145	4861594	26	5.2191	ng/mL	5.0000
8_2-FTS_1	M	4.888	4702	490145	15	0.0544	ng/mL	0.0480
PFDS_1	Auto	5.050	6205	646229	13	0.0522	ng/mL	0.0482
PFUnA	Auto	5.074	32575	3894474	14	0.0514	ng/mL	0.0500
PFUnA-13C_IS	Auto	5.072	3894474	3894474	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.072	3894474	4861594	26	4.9366	ng/mL	5.0000
PFDoA	Auto	5.251	24895	5590574	17	0.0503	ng/mL	0.0500
PFDoA-13C	Auto	5.252	5590574	4861594	26	4.8840	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.252	5590574	5590574	17	5.0000	ng/mL	5.0000
10_2-FtS_1	M	5.257	3196	490145	15	0.0456	ng/mL	0.0483
PFTrDA	Auto	5.423	38892	3899307	22	0.0536	ng/mL	0.0500
PFTeDA	Auto	5.577	40176	3899307	22	0.0565	ng/mL	0.0500
PFTeDA-13C	Auto	5.576	3899307	4861594	26	4.7607	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.576	3899307	3899307	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.224	1781223	1781223	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.224	1781223	4861594	26	4.7787	ng/mL	5.0000
FOSA	Auto	5.225	24211	1781223	18	0.0509	ng/mL	0.0500
N-MeFOSAA	Auto	4.995	2269	650443	19	0.0333	ng/mL	0.0500
N-MeFOSAA-d3	Auto	4.994	650443	4861594	26	4.4091	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.994	650443	650443	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.616	499787	499787	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.616	499787	4861594	26	4.7119	ng/mL	5.0000
N-MeFOSA	Auto	5.620	7370	499787	1	0.0558	ng/mL	0.0500
N-MeFOSE-d7	Auto	5.588	719709	4861594	26	4.6710	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.588	719709	719709	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.594	11615	719709	20	0.0555	ng/mL	0.0500

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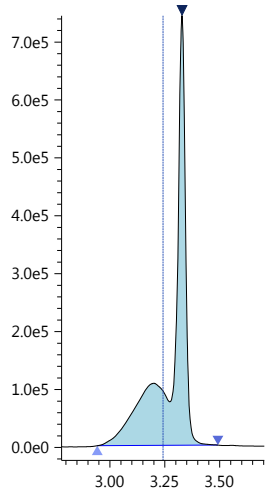
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.098	1790	642638	21	0.0591	ng/mL	0.0500
N-EtFOSAA-d5_IS	Auto	5.091	642638	642638	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.091	642638	4861594	26	4.5375	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.754	847736	847736	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.754	847736	4861594	26	4.7665	ng/mL	5.0000
N-EtFOSA	M	5.761	1609	847736	23	0.0536	ng/mL	0.0500
N-EtFOSE-d9_IS	Auto	5.719	753315	753315	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.719	753315	4861594	26	4.5301	ng/mL	5.0000
N-EtFOSE	Auto	5.730	9096	753315	24	0.0496	ng/mL	0.0500
13C7-PFUnDA_IS	Auto	5.072	4861594	4861594	26	5.0000	ng/mL	5.0000
PFPeS	M	4.203	3601	931514	16	0.0386	ng/mL	0.0470
PFNS	M	4.870	4243	646229	13	0.0518	ng/mL	0.0481

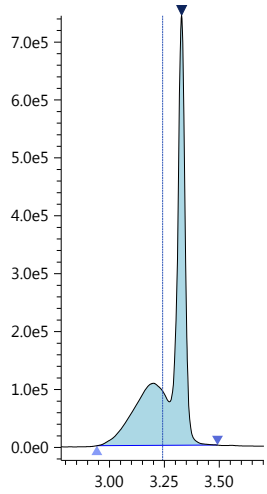
PFBA-13C_IS

Conc 5.0000
RT 3.328 Area 2908252
ISTD 216.90>172.15 (-) 7.45e5



PFBA-13C

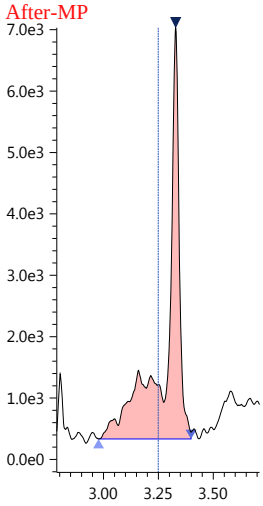
Conc 4.6620
RT 3.328 Area 2908252
Q 216.90>172.15 (-) 7.45e5



PFBA

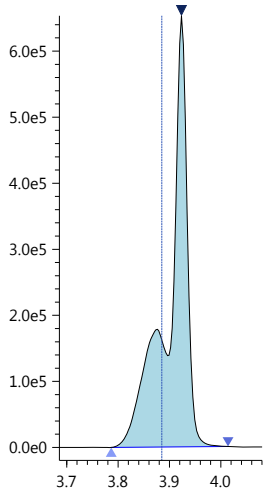
Conc 0.0524
RT 3.329 Area 26874
Q 213.00>169.10 (-) 7.03e3

After-MP



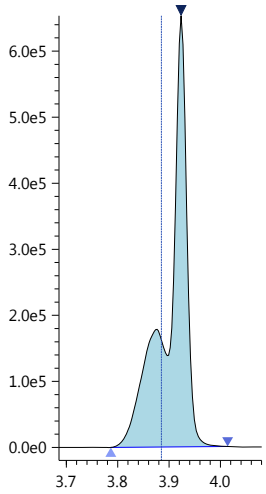
PFPeA-13C_IS

Conc 5.0000
RT 3.923 Area 1643727
ISTD 267.90>223.00 (-) 6.54e5



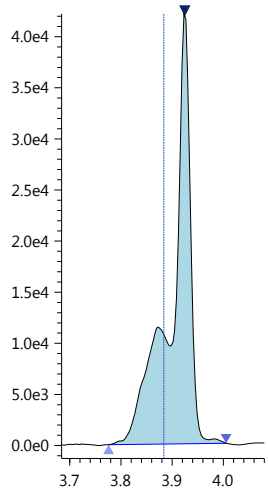
PFPeA-13C

Conc 4.7284
RT 3.923 Area 1643727
Q 267.90>223.00 (-) 6.54e5



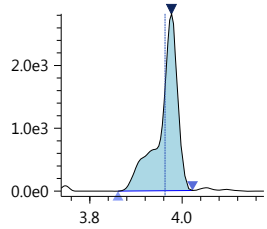
PFPeA

Conc 0.0520
RT 3.925 Area 108187
Q 263.05>219.10 (-) 4.22e4

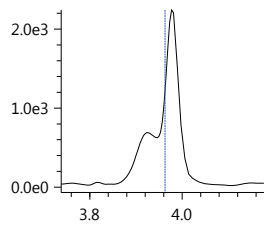


PFBS_1

Conc 0.0392
RT 3.977 Area 7438
R#1 71.62 (0.00)
Q 299.00>80.00 (-) 2.82e3

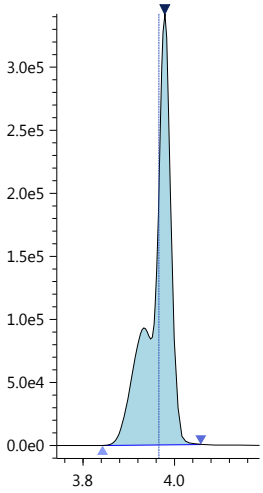


R1 298.80>99.00 (-) 2.24e3



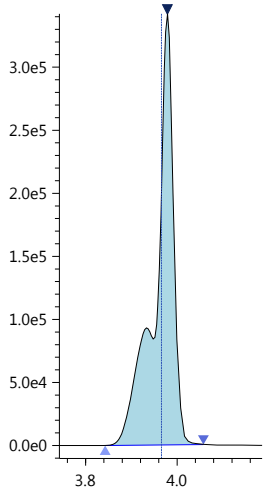
PFBS-13C

Conc 4.7879
RT 3.979 Area 931514
Q 301.80>80.00 (-) 3.42e5



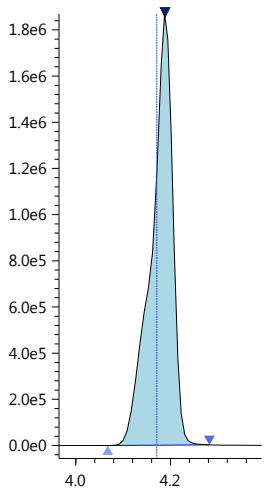
PFBS-13C_IS

Conc 5.0000
RT 3.979 Area 931514
ISTD 301.80>80.00 (-) 3.42e5



PFHxA-13C_IS

Conc 5.0000
RT 4.188 Area 5767106
ISTD 314.90>270.10 (-) 1.87e6



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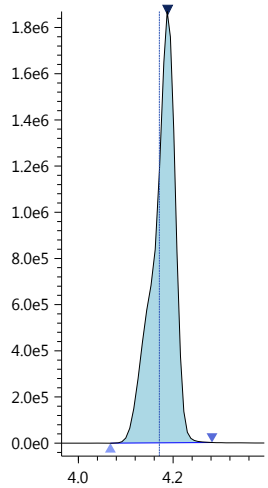
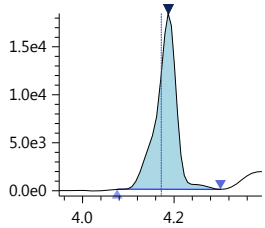
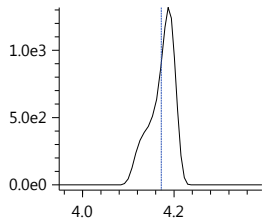
PFHxA-13C
Conc 4.9680
RT 4.188 Area 5767106
Q 314.90>270.10 (-) 1.87e6



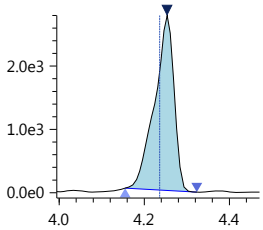
PFHxA
Conc 0.0510
RT 4.188 Area 53959
R#1 7.16 (0.00)
Q 313.00>269.00 (-) 1.85e4



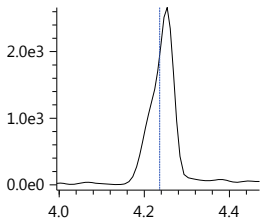
R1 313.00>119.10 (-) 1.32e3



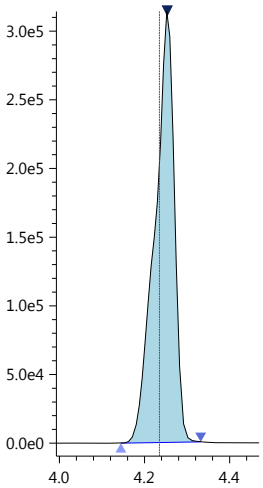
HPFO_DA
Conc 0.0472
RT 4.253 Area 8752
R#1 94.52 (0.00)
Q 329.00>169.00 (-) 2.80e3



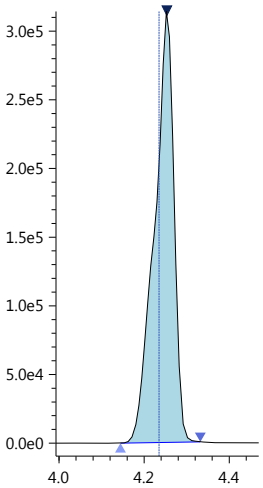
R1 329.00>285.10 (-) 2.66e3



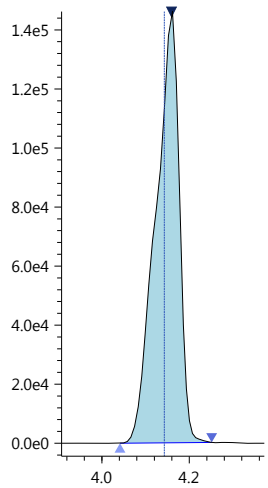
HFPO_DA-13C_IS
Conc 5.0000
RT 4.254 Area 999669
ISTD 332.00>286.80 (-) 3.14e5



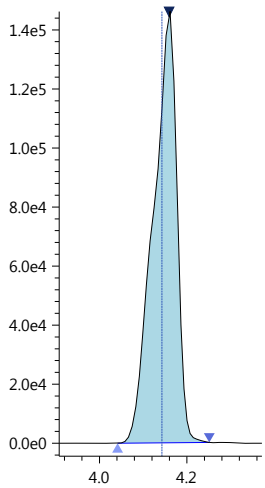
HFPO_DA-13C
Conc 4.8344
RT 4.254 Area 999669
Q 332.00>286.80 (-) 3.14e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.159 Area 546923
ISTD 328.80>309.05 (-) 1.46e5

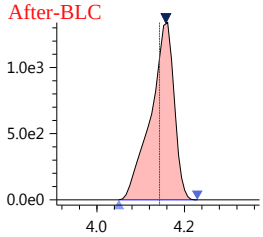


4_2-FTS-13C
Conc 4.5793
RT 4.159 Area 546923
Q 328.80>309.05 (-) 1.46e5

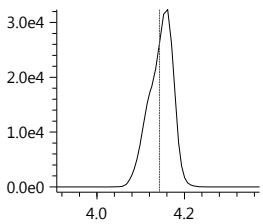


4_2-FTS_1
Conc 0.0527
RT 4.158 Area 4981
R#1 2398.45 (0.00)
Q 327.00>307.05 (-) 1.34e3

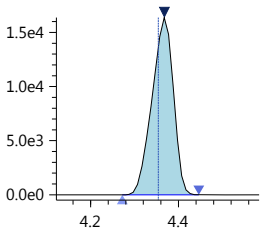
After-BLC



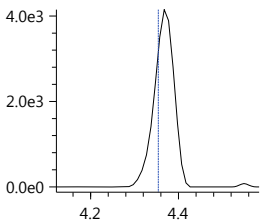
R1 327.00>81.10 (-) 3.24e4



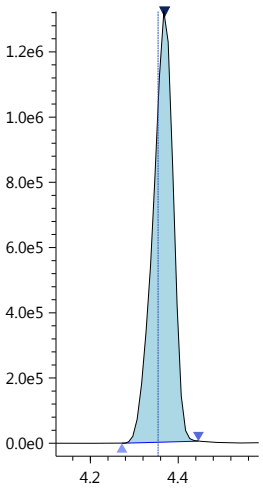
PFHpA
Conc 0.0600
RT 4.368 Area 55495
R#1 25.34 (0.00)
Q 362.90>319.00 (-) 1.64e4



R1 362.90>169.00 (-) 4.15e3



PFHpA-13C_IS
Conc 5.0000
RT 4.369 Area 4277512
ISTD 366.90>322.10 (-) 1.32e6



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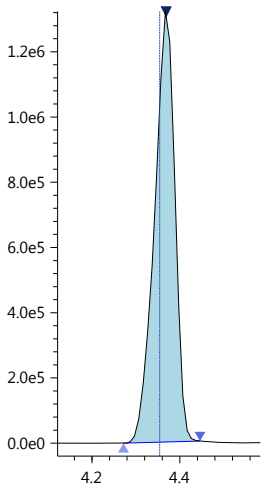
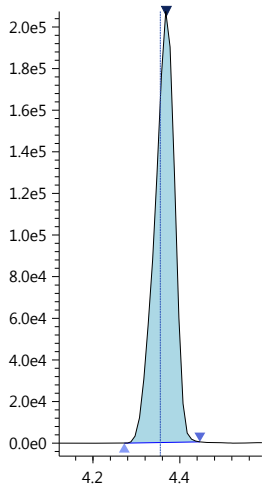
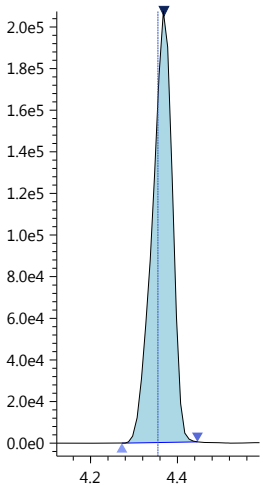
PFHpA-13C
Conc 4.9121
RT 4.369 Area 4277512
Q 366.90>322.10 (-) 1.32e6



PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 667721
ISTD 402.70>84.05 (-) 2.07e5

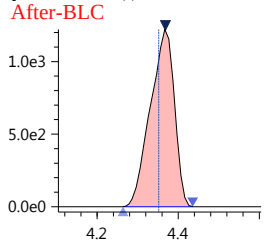


PFHxS-18O
Conc 4.9747
RT 4.369 Area 667721
Q 402.70>84.05 (-) 2.07e5

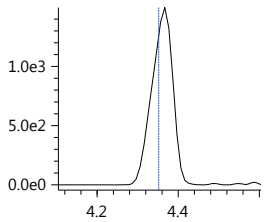


PFHxS_1
Conc 0.0392
RT 4.368 Area 5040
R#1 121.17 (0.00)
Q 399.00>80.00 (-) 1.22e3

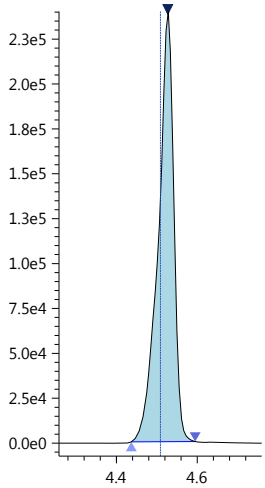
After-BLC



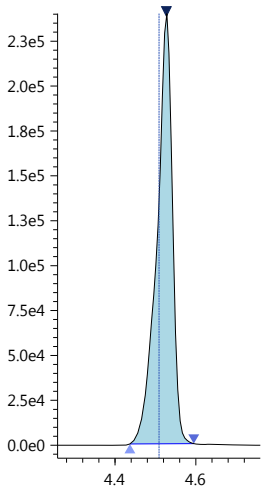
R1 399.00>99.00 (-) 1.50e3



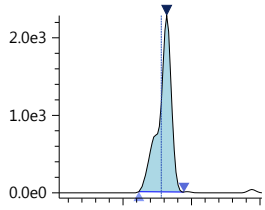
6_2-FTS-13C
Conc 5.2662
RT 4.527 Area 635948
Q 428.90>409.00 (-) 2.40e5



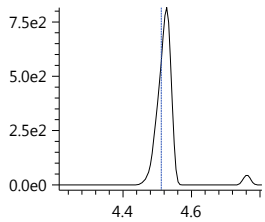
6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 635948
ISTD 428.90>409.00 (-) 2.40e5



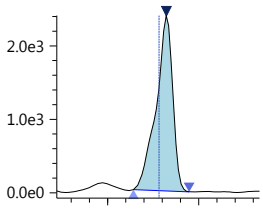
6_2-FTS_1
Conc 0.0492
RT 4.528 Area 5777
R#1 34.65 (0.00)
Q 427.00>407.00 (-) 2.29e3



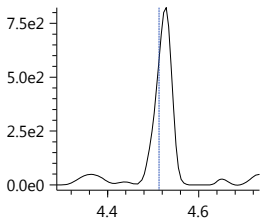
R1 427.00>80.90 (-) 8.16e2



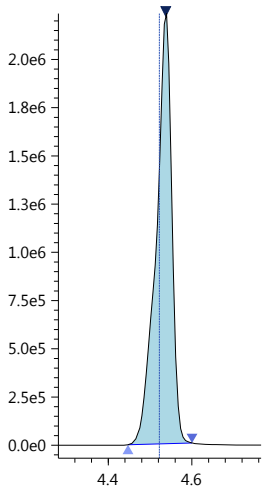
PFHpS_1
Conc 0.0449
RT 4.529 Area 6047
R#1 33.94 (0.00)
Q 449.00>80.15 (-) 2.41e3



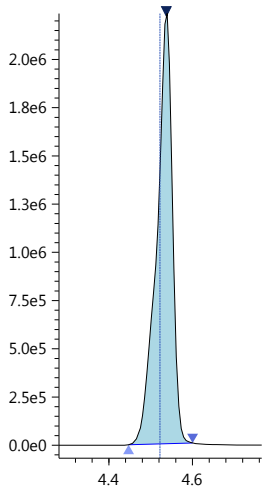
R1 449.00>99.20 (-) 8.23e2



PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 5781750
ISTD 416.80>372.05 (-) 2.24e6



PFOA-13C
Conc 4.9810
RT 4.537 Area 5781750
Q 416.80>372.05 (-) 2.24e6



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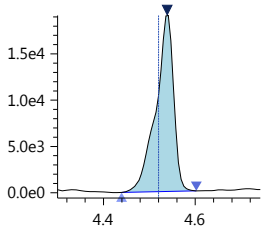
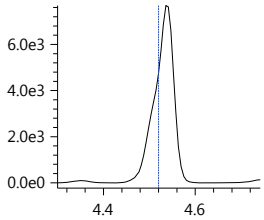
PFOA
Conc 0.0535
RT 4.539 Area 51364
R#1 39.76 (0.00)
Q 413.00>369.00 (-) 1.92e4

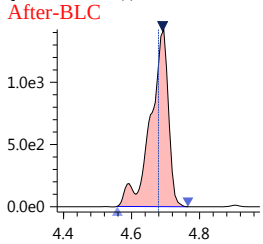


R1 413.00>169.10 (-) 7.69e3

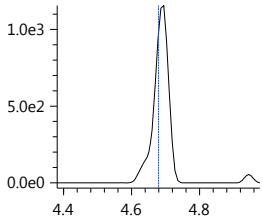


PFOS_1
Conc 0.0543
RT 4.692 Area 5174
R#1 81.59 (0.00)
Q 499.00>80.00 (-) 1.43e3

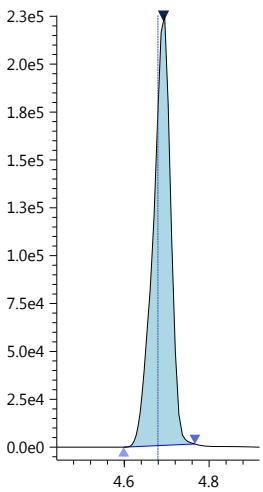
After-BLC



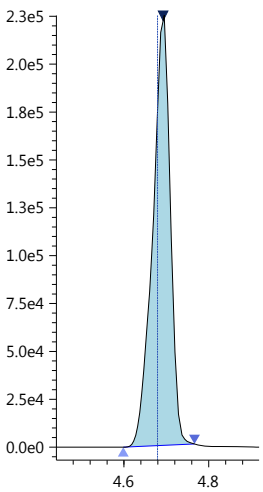
R1 499.00>99.00 (-) 1.16e3



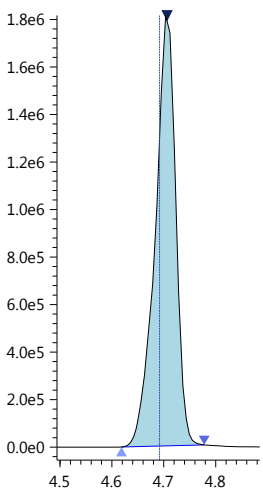
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 646229
ISTD 502.80>80.05 (-) 2.25e5



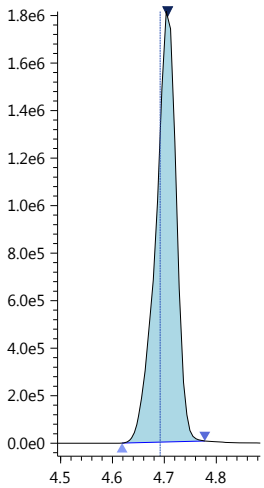
PFOS-13C
Conc 4.6130
RT 4.692 Area 646229
Q 502.80>80.05 (-) 2.25e5



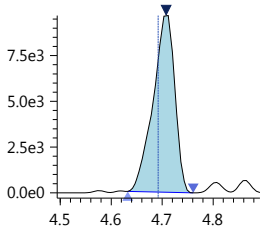
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4991222
ISTD 467.80>423.00 (-) 1.82e6



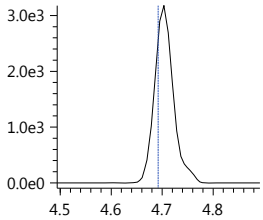
PFNA-13C
Conc 5.1678
RT 4.706 Area 4991222
Q 467.80>423.00 (-) 1.82e6



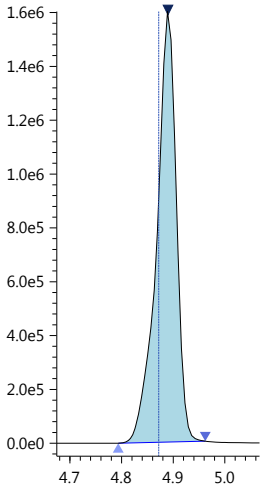
PFNA
Conc 0.0463
RT 4.708 Area 28771
R#1 26.74 (0.00)
Q 463.00>418.90 (-) 9.69e3



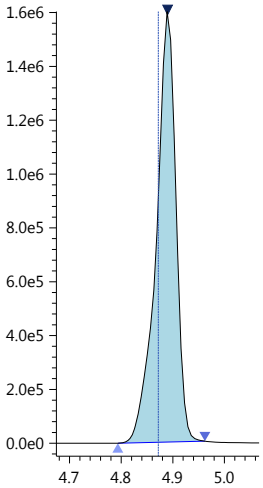
R1 463.00>219.00 (-) 3.18e3



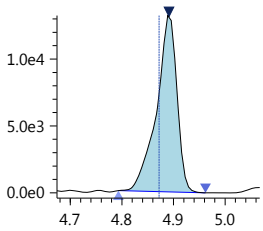
PFDA-13C_IS
Conc 5.0000
RT 4.890 Area 4232674
ISTD 514.80>469.95 (-) 1.60e6



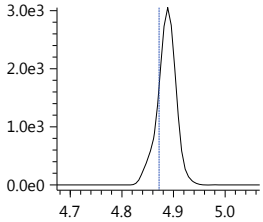
PFDA-13C
Conc 5.0201
RT 4.890 Area 4232674
Q 514.80>469.95 (-) 1.60e6



PFDA
Conc 0.0510
RT 4.891 Area 36156
R#1 21.29 (0.00)
Q 513.00>468.80 (-) 1.33e4



R1 513.00>219.10 (-) 3.05e3



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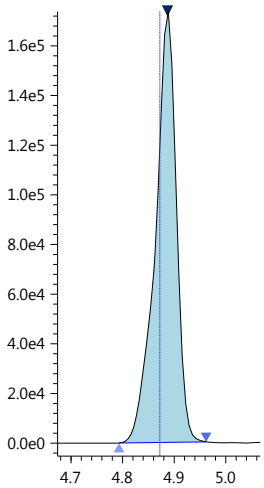
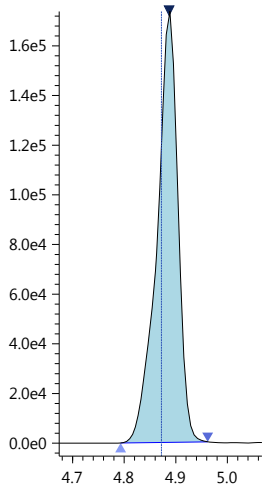
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 490145

ISTD 528.80>509.00 (-) 1.74e5



8_2-FTS-13C
Conc 5.2191
RT 4.887 Area 490145

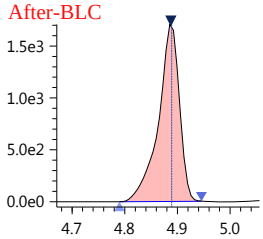
Q 528.80>509.00 (-) 1.74e5



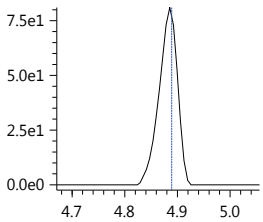
8_2-FTS_1
Conc 0.0544
RT 4.888 Area 4702
R#1 4.78 (0.00)

Q 527.10>506.90 (-) 1.71e3

After-BLC

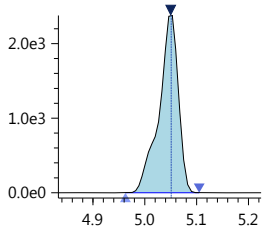


R1 527.20>487.00 (-) 8.10e1

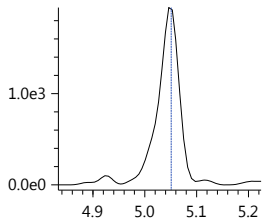


PFDS_1
Conc 0.0522
RT 5.050 Area 6205
R#1 78.56 (0.00)

Q 599.00>79.90 (-) 2.38e3

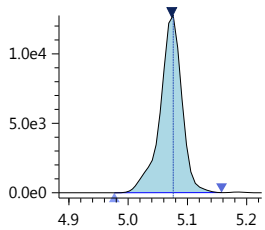


R1 599.00>99.10 (-) 1.94e3

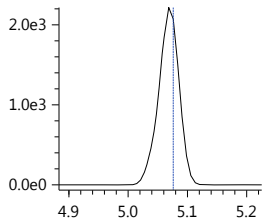


PFUnA
Conc 0.0514
RT 5.074 Area 32575
R#1 18.47 (0.00)

Q 563.00>518.90 (-) 1.28e4

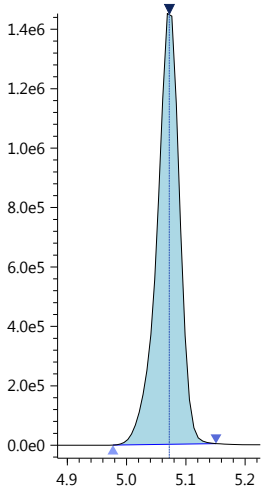


R1 563.00>219.00 (-) 2.22e3



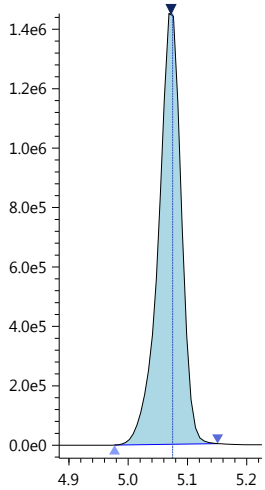
PFUnA-13C_IS
Conc 5.0000
RT 5.072 Area 3894474

ISTD 564.80>519.95 (-) 1.45e6



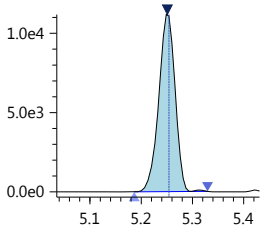
PFUnA-13C
Conc 4.9366
RT 5.072 Area 3894474

Q 564.80>519.95 (-) 1.45e6

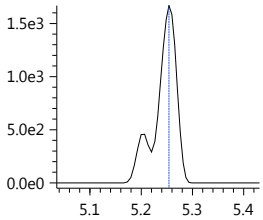


PFDoA
Conc 0.0503
RT 5.251 Area 24895
R#1 12.84 (0.00)

Q 613.05>569.00 (-) 1.12e4

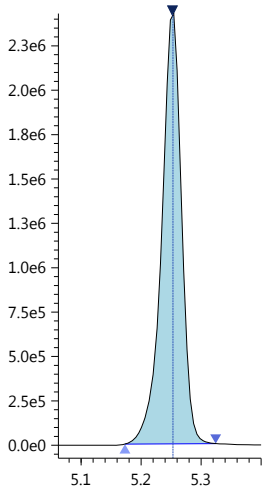


R1 613.05>169.00 (-) 1.67e3



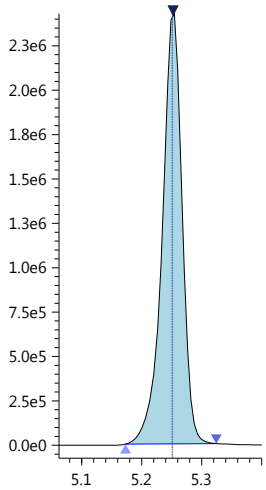
PFDoA-13C
Conc 4.8840
RT 5.252 Area 5590574

Q 614.80>569.95 (-) 2.43e6



PFDoA-13C_IS
Conc 5.0000
RT 5.252 Area 5590574

ISTD 614.80>569.95 (-) 2.43e6



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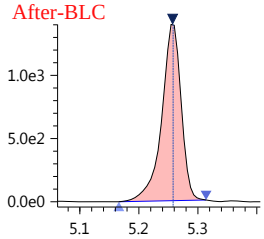
10_2-FtS_1

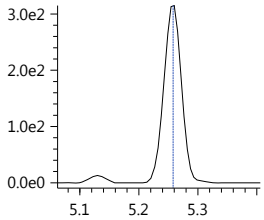
Conc 0.0456
RT 5.257 Area 3196
R#1 22.42 (0.00)

Q 627.00>606.95 (-) 1.40e3

After-BLC



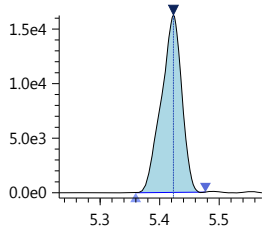
R1 627.00>81.25 (-) 3.15e2



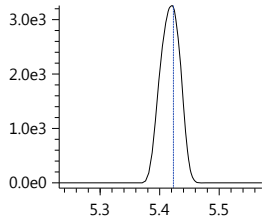
PFTrDA

Conc 0.0536
RT 5.423 Area 38892
R#1 15.63 (0.00)

Q 663.00>618.90 (-) 1.62e4



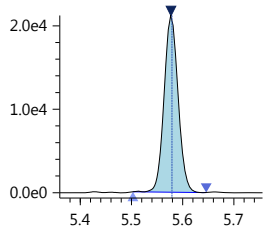
R1 662.90>169.00 (-) 3.26e3



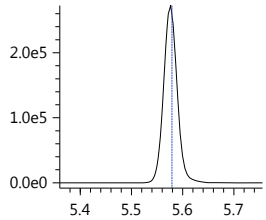
PFTeDA

Conc 0.0565
RT 5.577 Area 40176
R#1 1301.49 (0.00)

Q 713.40>669.00 (-) 2.12e4



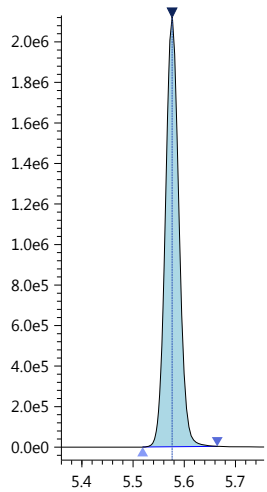
R1 713.40>169.10 (-) 2.73e5



PFTeDA-13C

Conc 4.7607
RT 5.576 Area 3899307

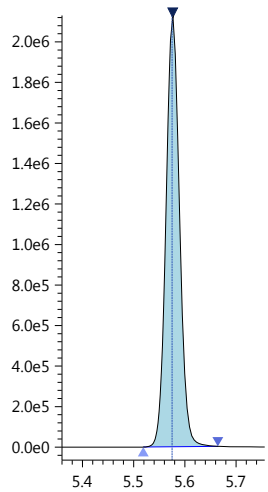
Q 714.70>669.90 (-) 2.13e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.576 Area 3899307

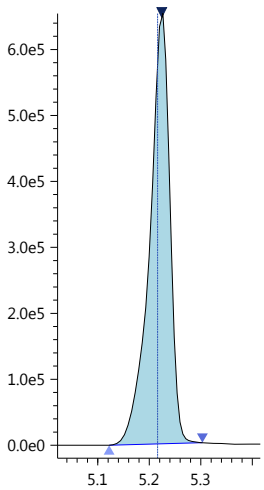
ISTD 714.70>669.90 (-) 2.13e6



FOSA-13C_IS

Conc 5.0000
RT 5.224 Area 1781223

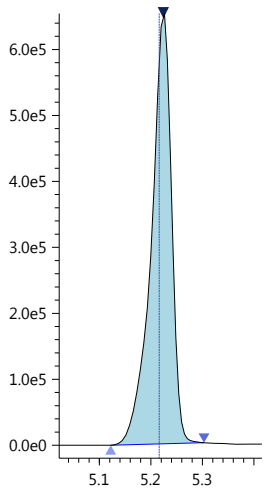
ISTD 506.00>78.05 (-) 6.54e5



FOSA-13C

Conc 4.7787
RT 5.224 Area 1781223

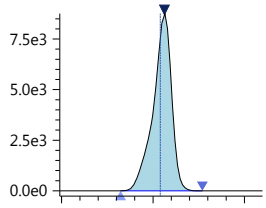
Q 506.00>78.05 (-) 6.54e5



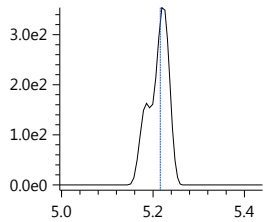
FOSA

Conc 0.0509
RT 5.225 Area 24211
R#1 4.05 (0.00)

Q 498.20>78.00 (-) 8.76e3



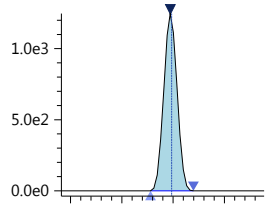
R1 498.20>64.10 (-) 3.54e2



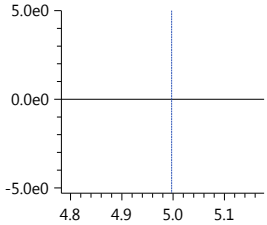
N-MeFOSAA

Conc 0.0333
RT 4.995 Area 2269
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 1.25e3



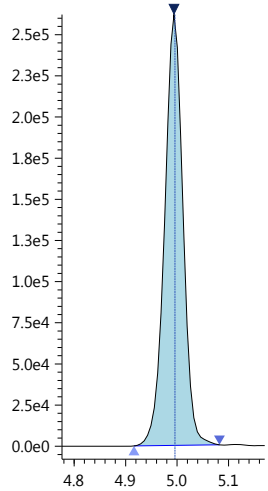
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 4.4091
RT 4.994 Area 650443

Q 572.80>419.05 (-) 2.62e5



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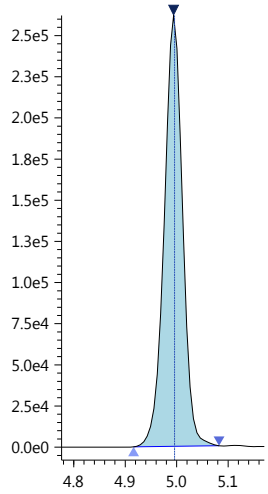
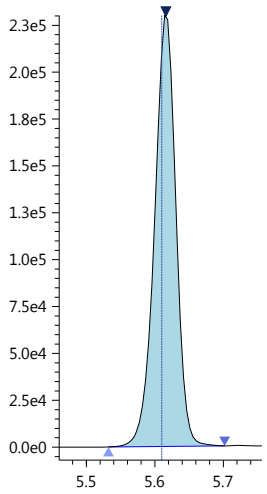
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 650443
ISTD 572.80>419.05 (-) 2.62e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.616 Area 499787
ISTD 514.90>168.90 (-) 2.30e5



N-MeFOSA-d3
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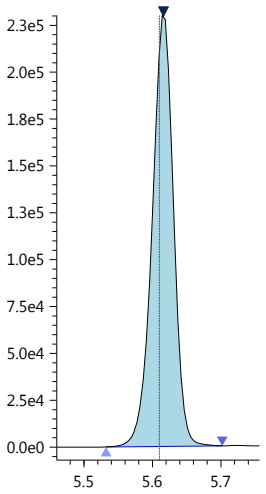
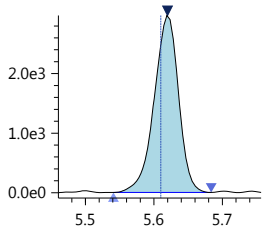
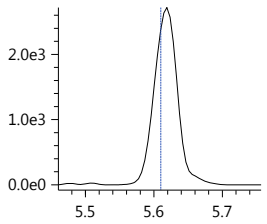
RT 5.616 Area 499787
Q 514.90>168.90 (-) 2.30e5



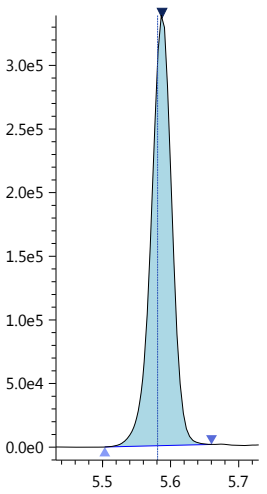
N-MeFOSA
Conc 0.0558
RT 5.620 Area 7370
R#1 90.62 (0.00)
Q 512.00>169.10 (-) 2.98e3



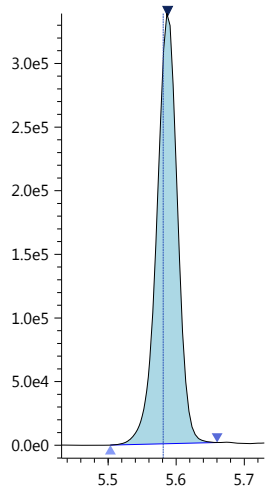
R1 512.00>219.00 (-) 2.72e3



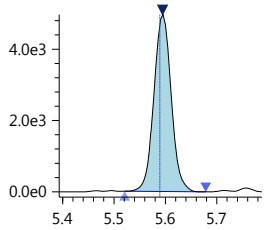
N-MeFOSE-d7
Conc 4.6710
RT 5.588 Area 719709
Q 622.70>59.10 (-) 3.39e5



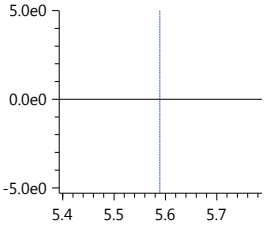
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 719709
ISTD 622.70>59.10 (-) 3.39e5



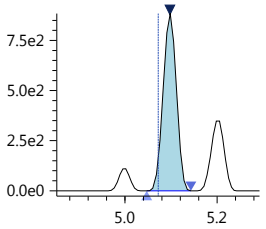
N-MeFOSE
Conc 0.0555
RT 5.594 Area 11615
R#1 0.00 (0.00)
Q 616.00>59.00 (-) 4.97e3



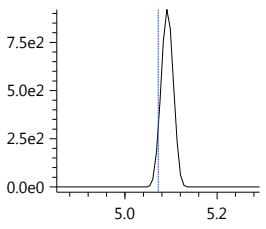
R1 556.00>121.20 (-) 0.00e0



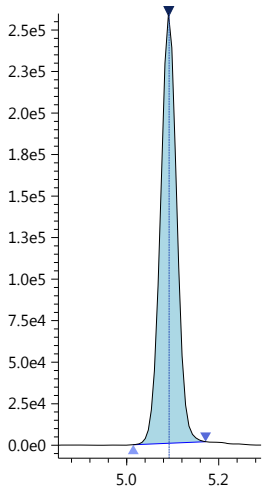
N-EtFOSAA
Conc 0.0591
RT 5.098 Area 1790
R#1 91.84 (0.00)
Q 584.20>418.95 (-) 8.84e2



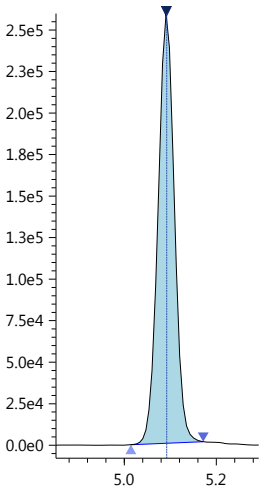
R1 584.20>526.10 (-) 9.20e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.091 Area 642638
ISTD 588.80>419.00 (-) 2.60e5



N-EtFOSAA-d5
Conc 4.5375
RT 5.091 Area 642638
Q 588.80>419.00 (-) 2.60e5



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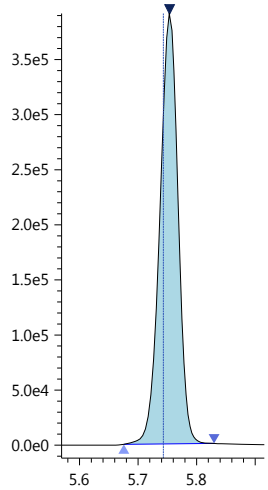
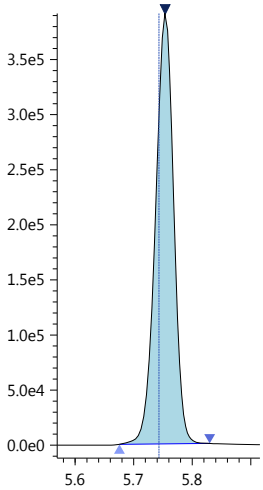
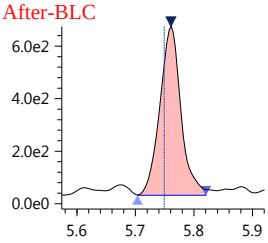
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.754 Area 847736
ISTD 530.90>169.15 (-) 3.92e5



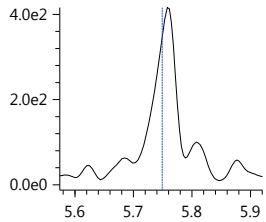
N-EtFOSA-d9
Conc 4.7665
RT 5.754 Area 847736
Q 530.90>169.15 (-) 3.92e5



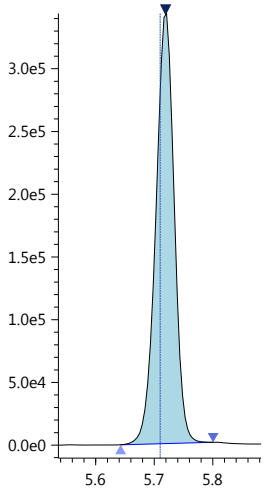
N-EtFOSA
Conc 0.0536
RT 5.761 Area 1609
R#1 59.14 (0.00)
Q 526.90>169.10 (-) 6.75e2
After-BLC



R1 526.90>219.00 (-) 4.16e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.719 Area 753315
ISTD 638.70>59.10 (-) 3.44e5



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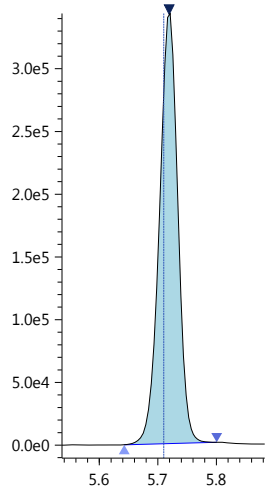
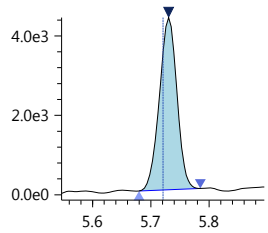
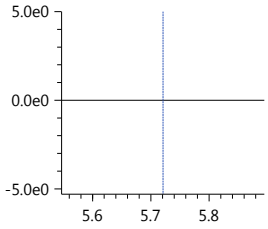
Q 638.70>59.10 (-) 3.44e5



N-EtFOSE
Conc 0.0496
RT 5.730 Area 9096
R#1 0.00 (0.00)
Q 630.00>58.90 (-) 4.46e3



R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS
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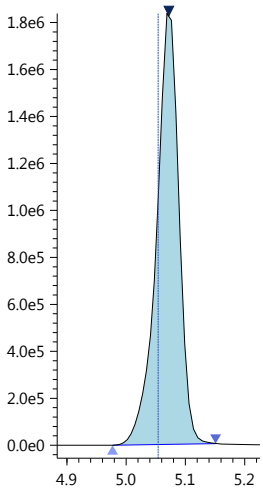
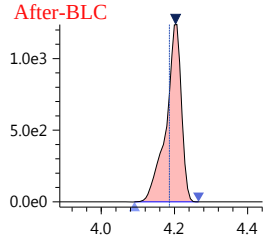
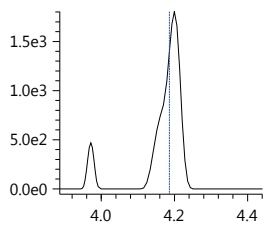


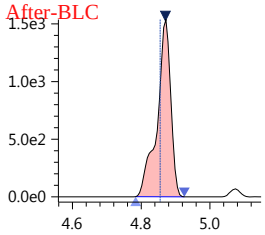
PFPeS
Conc 0.0386
RT 4.203 Area 3601
R#1 145.26 (0.00)
Q 349.00>99.00 (-) 1.24e3
After-BLC



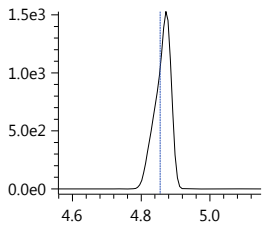
R1 349.00>79.95 (-) 1.80e3



PFNS
Conc 0.0518
RT 4.870 Area 4243
R#1 92.48 (0.00)
Q 549.00>99.00 (-) 1.54e3
After-BLC



R1 549.00>79.95 (-) 1.53e3



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Printed at 1/7/2019 10:13:37 AM

010419_016

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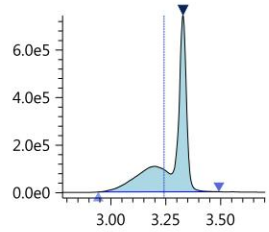
Date acquired: 1/4/2019 5:06:07 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_016.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.328 Area 2908252
ISTD 216.90>172.15 (-) 7.45e5



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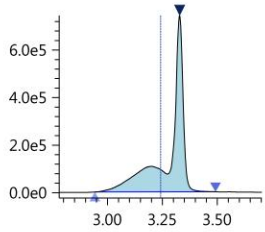
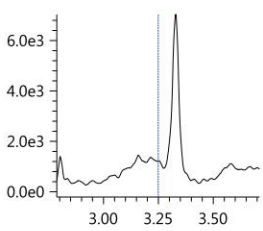
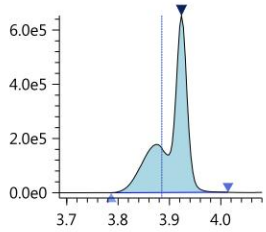
RT 3.328 Area 2908252
Q 216.90>172.15 (-) 7.45e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 7.03e3



PFPeA-13C_IS
Conc 5.0000
RT 3.923 Area 1643727
ISTD 267.90>223.00 (-) 6.54e5



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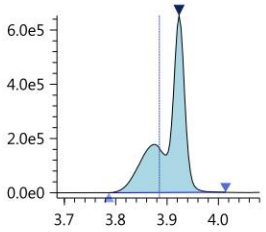
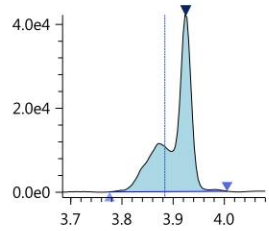
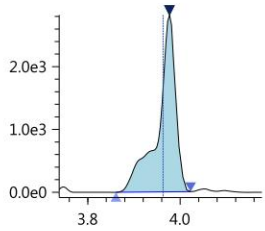
Q 267.90>223.00 (-) 6.54e5



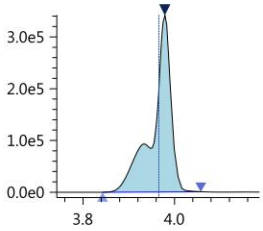
PFPeA
Conc 0.0500
RT 3.925 Area 108187
Q 263.05>219.10 (-) 4.22e4



PFBS_1
Conc 0.0444
RT 3.977 Area 7438
Q 299.00>80.00 (-) 2.82e3



PFBS-13C
Conc 5.0000
RT 3.979 Area 931514
Q 301.80>80.00 (-) 3.42e5



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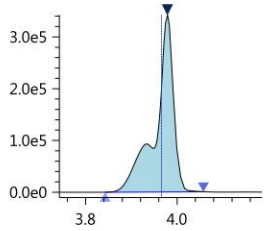
RT 3.979 Area 931514
ISTD 301.80>80.00 (-) 3.42e5



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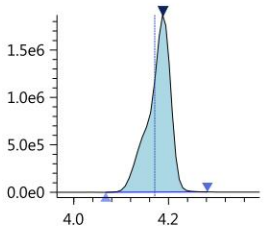
RT 4.188 Area 5767106
ISTD 314.90>270.10 (-) 1.87e6



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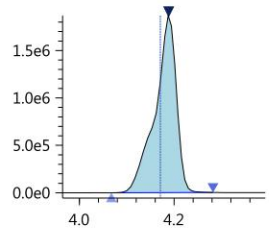
Q 314.90>270.10 (-) 1.87e6



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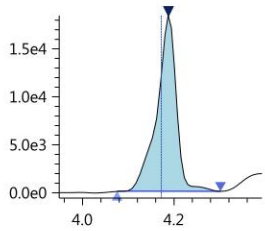
Q 313.00>269.00 (-) 1.85e4



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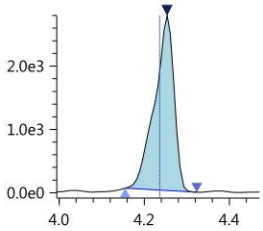
Q 329.00>169.00 (-) 2.80e3



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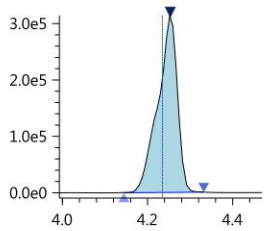
Conc 5.0000
RT 4.254 Area 999669
ISTD 332.00>286.80 (-) 3.14e5



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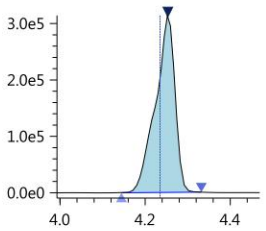
Q 332.00>286.80 (-) 3.14e5



4_2-FTS-13C_IS
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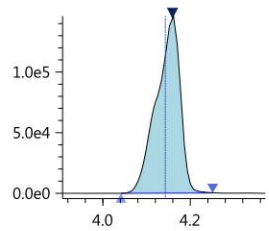
RT 4.159 Area 546923
ISTD 328.80>309.05 (-) 1.46e5



4_2-FTS-13C
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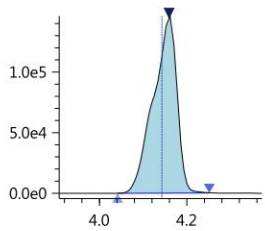
RT 4.159 Area 546923
Q 328.80>309.05 (-) 1.46e5



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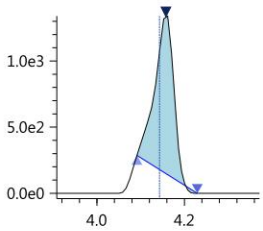
Q 327.00>307.05 (-) 1.34e3



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Conc 0.0500
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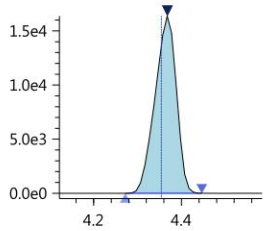
Q 362.90>319.00 (-) 1.64e4



PFHpA-13C_IS
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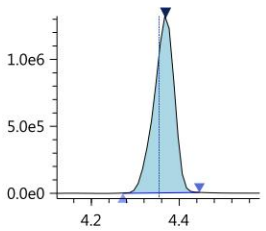
RT 4.369 Area 4277512
ISTD 366.90>322.10 (-) 1.32e6



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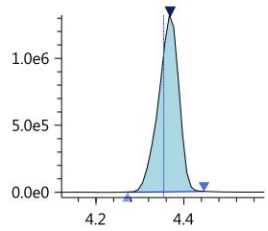
PFHpA-13C
Conc 5.0000
RT 4.369 Area 4277512
Q 366.90>322.10 (-) 1.32e6



PFHxS-18O_IS
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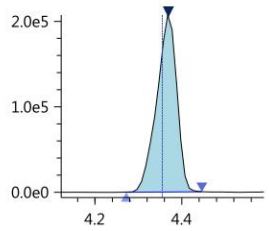

PFHxS-18O
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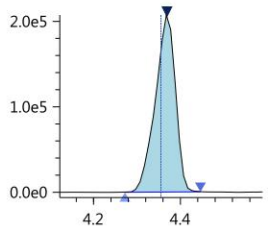
Q 402.70>84.05 (-) 2.07e5



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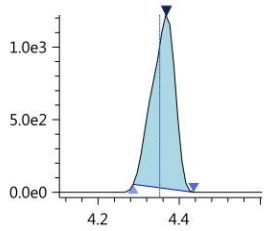
Conc 0.0457
RT 4.368 Area 4770
Q 399.00>80.00 (-) 1.22e3



6_2-FTS-13C
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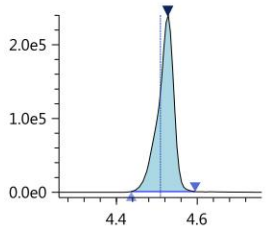
Q 428.90>409.00 (-) 2.40e5



6_2-FTS-13C_IS
Conc 5.0000
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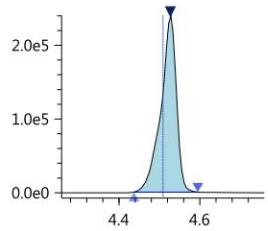
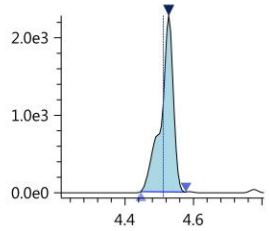
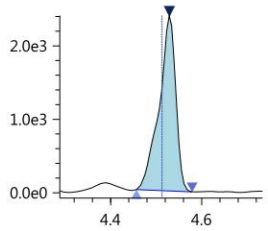
ISTD 428.90>409.00 (-) 2.40e5



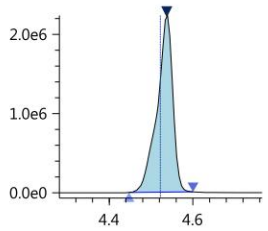
6_2-FTS_1
Conc 0.0476
RT 4.528 Area 5777
Q 427.00>407.00 (-) 2.29e3



PFHpS_1
Conc 0.0477
RT 4.529 Area 6047
Q 449.00>80.15 (-) 2.41e3



PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 5781750
ISTD 416.80>372.05 (-) 2.24e6



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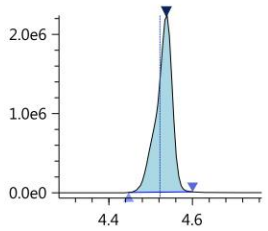

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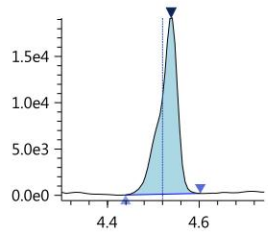

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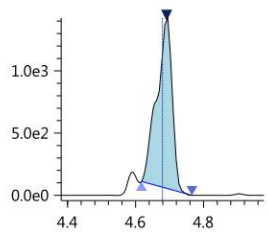
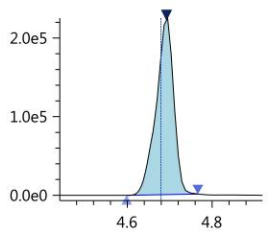
Conc 0.0465
RT 4.692 Area 4298
Q 499.00>80.00 (-) 1.43e3



PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 646229
ISTD 502.80>80.05 (-) 2.25e5



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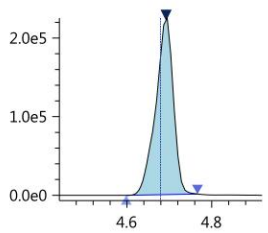
RT 4.692 Area 646229
Q 502.80>80.05 (-) 2.25e5



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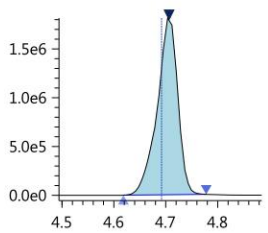
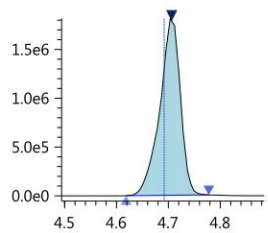
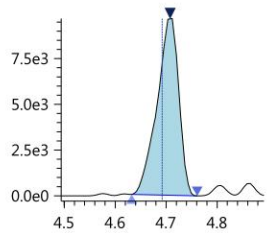
Conc 5.0000
RT 4.706 Area 4991222
ISTD 467.80>423.00 (-) 1.82e6



PFNA-13C
Conc 5.0000
RT 4.706 Area 4991222
Q 467.80>423.00 (-) 1.82e6



PFNA
Conc 0.0500
RT 4.708 Area 28771
Q 463.00>418.90 (-) 9.69e3



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Conc 5.0000
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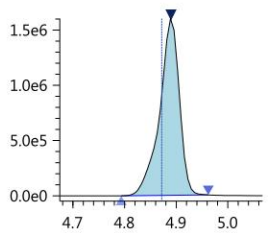
ISTD 514.80>469.95 (-) 1.60e6



PFDA-13C
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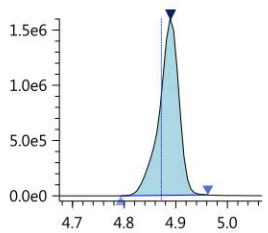
Q 514.80>469.95 (-) 1.60e6



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RT 4.891 Area 36156
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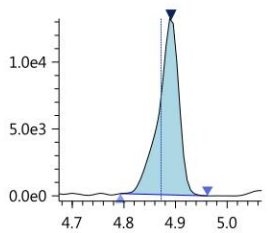

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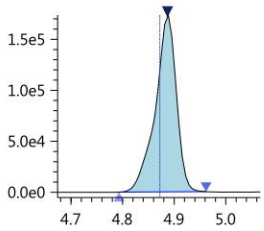
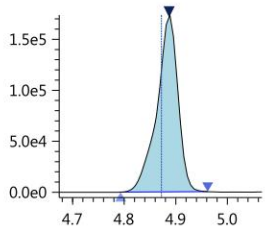
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 490145
ISTD 528.80>509.00 (-) 1.74e5



8_2-FTS-13C
Conc 5.0000
RT 4.887 Area 490145
Q 528.80>509.00 (-) 1.74e5



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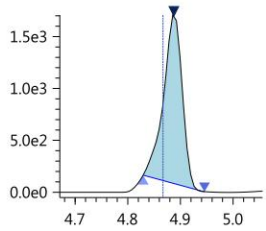
RT 4.888 Area 4013
Q 527.10>506.90 (-) 1.71e3



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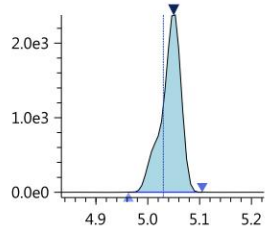
Q 599.00>79.90 (-) 2.38e3



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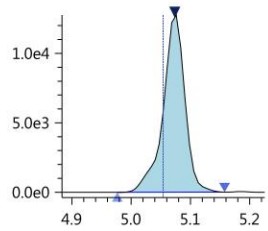
Q 563.00>518.90 (-) 1.28e4



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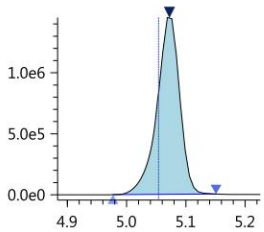
Conc 5.0000
RT 5.072 Area 3894474
ISTD 564.80>519.95 (-) 1.45e6



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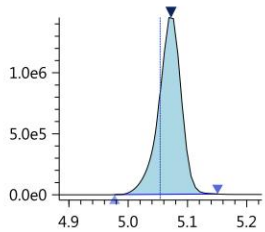
Q 564.80>519.95 (-) 1.45e6



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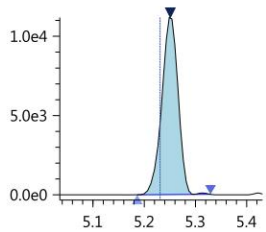
RT 5.251 Area 24895
Q 613.05>569.00 (-) 1.12e4



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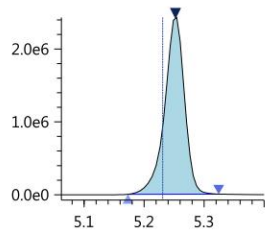
RT 5.252 Area 5590574
Q 614.80>569.95 (-) 2.43e6



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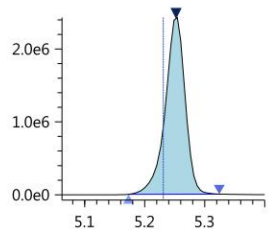
ISTD 614.80>569.95 (-) 2.43e6



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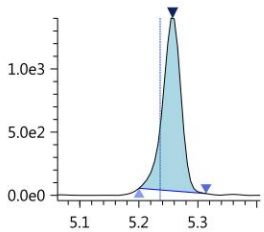
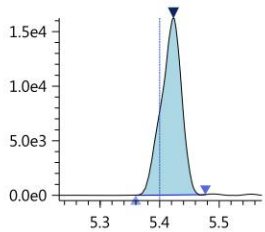
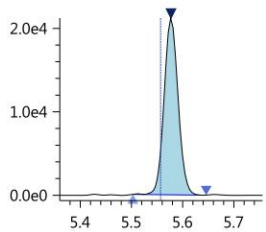
RT 5.257 Area 2987
Q 627.00>606.95 (-) 1.40e3



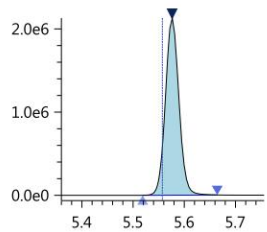
PFTrDA
Conc 0.0500
RT 5.423 Area 38892
Q 663.00>618.90 (-) 1.62e4



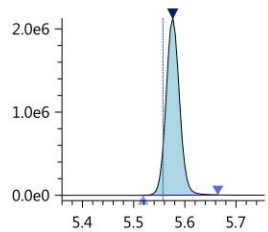
PFTeDA
Conc 0.0500
RT 5.577 Area 40176
Q 713.40>669.00 (-) 2.12e4



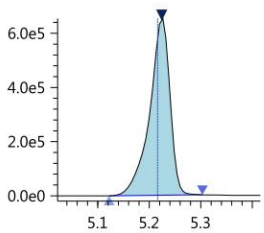
PFTeDA-13C
Conc 5.0000
RT 5.576 Area 3899307
Q 714.70>669.90 (-) 2.13e6



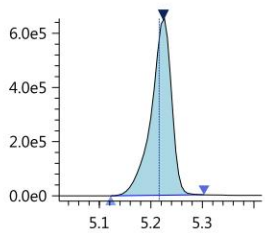
PFTeDA-13C_IS
Conc 5.0000
RT 5.576 Area 3899307
ISTD 714.70>669.90 (-) 2.13e6



FOSA-13C_IS
Conc 5.0000
RT 5.224 Area 1781223
ISTD 506.00>78.05 (-) 6.54e5



FOSA-13C
Conc 5.0000
RT 5.224 Area 1781223
Q 506.00>78.05 (-) 6.54e5



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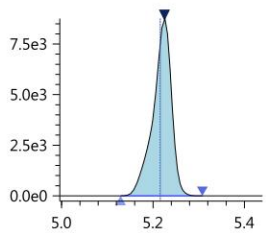
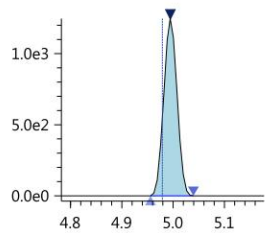
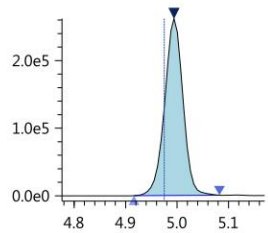
Conc 0.0500
RT 5.225 Area 24211
Q 498.20>78.00 (-) 8.76e3



N-MeFOSAA
Conc 0.0500
RT 4.995 Area 2269
Q 570.20>419.00 (-) 1.25e3



N-MeFOSAA-d3
Conc 5.0000
RT 4.994 Area 650443
Q 572.80>419.05 (-) 2.62e5



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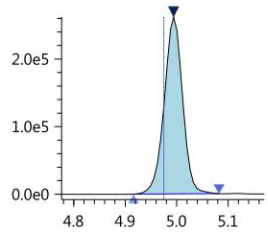
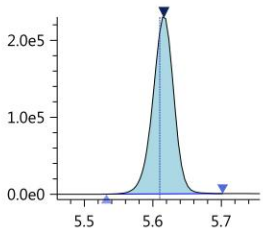
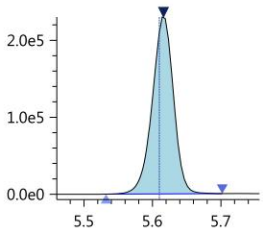
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 650443
ISTD 572.80>419.05 (-) 2.62e5



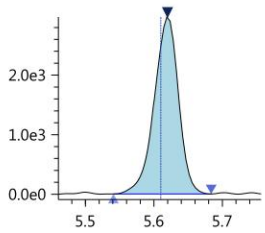
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.616 Area 499787
ISTD 514.90>168.90 (-) 2.30e5



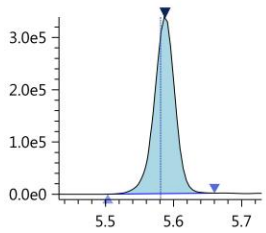
N-MeFOSA-d3
Conc 5.0000
RT 5.616 Area 499787
Q 514.90>168.90 (-) 2.30e5



N-MeFOSA
Conc 0.0500
RT 5.620 Area 7370
Q 512.00>169.10 (-) 2.98e3



N-MeFOSE-d7
Conc 5.0000
RT 5.588 Area 719709
Q 622.70>59.10 (-) 3.39e5



N-MeFOSE-d7_IS
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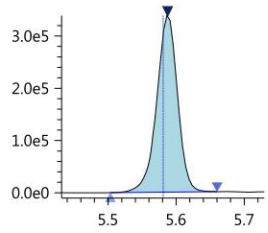
RT 5.588 Area 719709
ISTD 622.70>59.10 (-) 3.39e5



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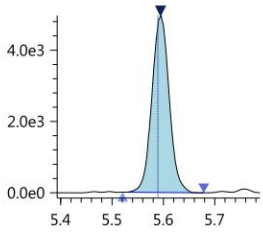
Conc 0.0500
RT 5.594 Area 11615
Q 616.00>59.00 (-) 4.97e3



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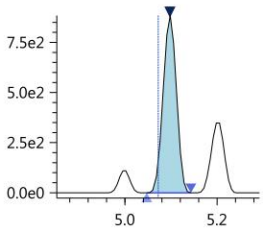
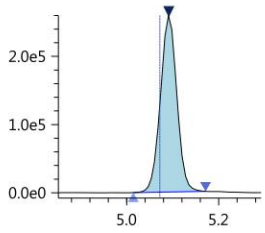
Conc 0.0500
RT 5.098 Area 1790
Q 584.20>418.95 (-) 8.84e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.091 Area 642638
ISTD 588.80>419.00 (-) 2.60e5



N-EtFOSAA-d5
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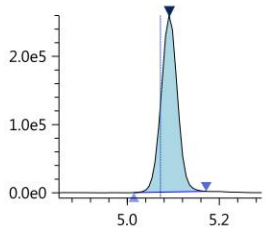
RT 5.091 Area 642638
Q 588.80>419.00 (-) 2.60e5



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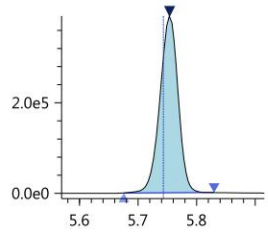
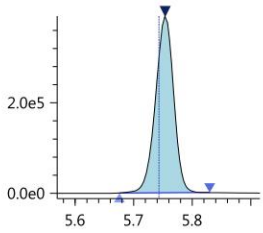
Conc 5.0000
RT 5.754 Area 847736
ISTD 530.90>169.15 (-) 3.92e5



N-EtFOSA-d9
Conc 5.0000
RT 5.754 Area 847736
Q 530.90>169.15 (-) 3.92e5



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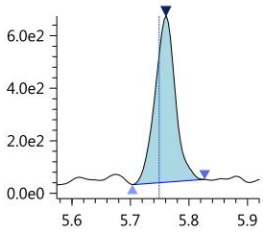
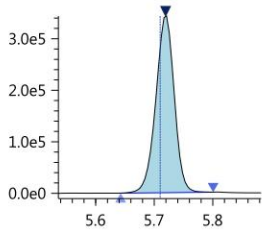
Conc 0.0500
RT 5.761 Area 1536
Q 526.90>169.10 (-) 6.75e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.719 Area 753315
ISTD 638.70>59.10 (-) 3.44e5



N-EtFOSE-d9
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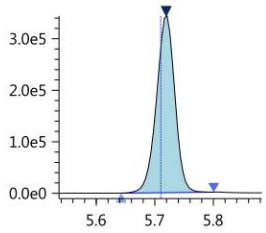
RT 5.719 Area 753315
Q 638.70>59.10 (-) 3.44e5



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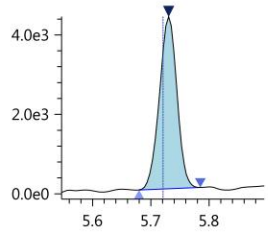
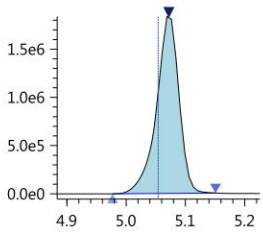
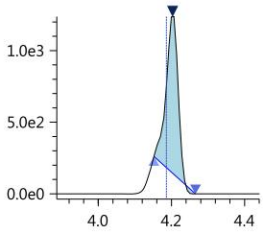
RT 5.730 Area 9096
Q 630.00>58.90 (-) 4.46e3



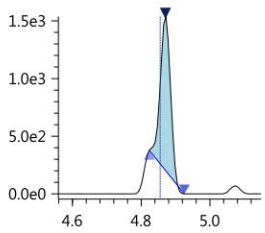
13C7-PFUnDA_IS
Conc 5.0000
RT 5.072 Area 4861594
ISTD 570.00>525.00 (-) 1.84e6



PFPeS
Conc 0.0470
RT 4.203 Area 2464
Q 349.00>99.00 (-) 1.24e3



PFNS
Conc 0.0481
RT 4.870 Area 2723
Q 549.00>99.00 (-) 1.54e3



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010419_017

Sample ID: 0.10 PPB ICAL
Date acquired: 1/4/2019 5:16:36 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_017.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.322	2985562	2985562	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.322	2985562	4747642	26	4.9008	ng/mL	5.0000
PFBA	M	3.323	49290	2985562	2	0.0936	ng/mL	0.1000
PFPeA-13C_IS	Auto	3.915	1668115	1668115	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.915	1668115	4747642	26	4.9137	ng/mL	5.0000
PFPeA	Auto	3.916	154107	1668115	4	0.1064	ng/mL	0.1000
PFBS_1	Auto	3.969	16836	922222	16	0.0896	ng/mL	0.0887
PFBS-13C	Auto	3.970	922222	4747642	26	4.8539	ng/mL	5.0000
PFBS-13C_IS	Auto	3.970	922222	922222	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.179	5401395	5401395	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.179	5401395	4747642	26	4.7647	ng/mL	5.0000
PFHxA	Auto	4.179	93993	5401395	6	0.0966	ng/mL	0.1000
HPFO_DA	Auto	4.244	17976	976795	3	0.0993	ng/mL	0.1000
HFPO_DA-13C_IS	Auto	4.244	976795	976795	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.244	976795	4747642	26	4.8372	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.151	585137	585137	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.151	585137	4747642	26	5.0168	ng/mL	5.0000
4_2-FTS_1	Auto	4.153	9210	585137	5	0.0910	ng/mL	0.0937
PFHpA	Auto	4.358	78288	4342761	8	0.0836	ng/mL	0.1000
PFHpA-13C_IS	Auto	4.359	4342761	4342761	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.359	4342761	4747642	26	5.1067	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.360	700030	700030	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.360	700030	4747642	26	5.3405	ng/mL	5.0000
PFHxS_1	Auto	4.358	14740	700030	7	0.1093	ng/mL	0.0913
6_2-FTS-13C	Auto	4.518	617173	4747642	26	5.2334	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.518	617173	617173	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.517	10555	617173	10	0.0926	ng/mL	0.0951
PFHpS_1	Auto	4.520	12057	700030	7	0.0855	ng/mL	0.0953
PFOA-13C_IS	Auto	4.528	5777047	5777047	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.528	5777047	4747642	26	5.0964	ng/mL	5.0000
PFOA	Auto	4.528	100323	5777047	9	0.1052	ng/mL	0.1000
PFOS_1	Auto	4.683	9347	663204	13	0.0956	ng/mL	0.0929
PFOS-13C_IS	Auto	4.683	663204	663204	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.683	663204	4747642	26	4.8478	ng/mL	5.0000
PFNA-13C_IS	Auto	4.697	4657468	4657468	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.697	4657468	4747642	26	4.9380	ng/mL	5.0000
PFNA	Auto	4.696	63629	4657468	11	0.1056	ng/mL	0.1000
PFDA-13C_IS	Auto	4.881	4090702	4090702	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.881	4090702	4747642	26	4.9682	ng/mL	5.0000
PFDA	Auto	4.881	73648	4090702	12	0.1075	ng/mL	0.1000
8_2-FTS-13C_IS	Auto	4.879	481552	481552	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.879	481552	4747642	26	5.2506	ng/mL	5.0000
8_2-FTS_1	Auto	4.877	8090	481552	15	0.0953	ng/mL	0.0960
PFDS_1	Auto	5.042	14980	663204	13	0.1228	ng/mL	0.0965
PFUnA	Auto	5.064	70962	4003894	14	0.1094	ng/mL	0.1000
PFUnA-13C_IS	Auto	5.064	4003894	4003894	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.064	4003894	4747642	26	5.1971	ng/mL	5.0000
PFDoA	Auto	5.242	67583	5635046	17	0.1192	ng/mL	0.1000
PFDoA-13C	Auto	5.243	5635046	4747642	26	5.0410	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.243	5635046	5635046	17	5.0000	ng/mL	5.0000
10_2-FtS_1	M	5.250	6754	481552	15	0.0981	ng/mL	0.0966
PFTrDA	Auto	5.415	74226	4156880	22	0.0976	ng/mL	0.1000
PFTeDA	Auto	5.568	52609	4156880	22	0.0947	ng/mL	0.1000
PFTeDA-13C	Auto	5.567	4156880	4747642	26	5.1970	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.567	4156880	4156880	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.215	1800483	1800483	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.215	1800483	4747642	26	4.9463	ng/mL	5.0000
FOSA	Auto	5.215	46099	1800483	18	0.0958	ng/mL	0.1000
N-MeFOSAA	M	4.985	7761	716898	19	0.1033	ng/mL	0.1000
N-MeFOSAA-d3	Auto	4.985	716898	4747642	26	4.9762	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.985	716898	716898	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.607	509700	509700	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.607	509700	4747642	26	4.9207	ng/mL	5.0000
N-MeFOSA	Auto	5.611	12776	509700	1	0.0949	ng/mL	0.1000
N-MeFOSE-d7	Auto	5.579	743639	4747642	26	4.9421	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.579	743639	743639	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.587	19647	743639	20	0.0909	ng/mL	0.1000

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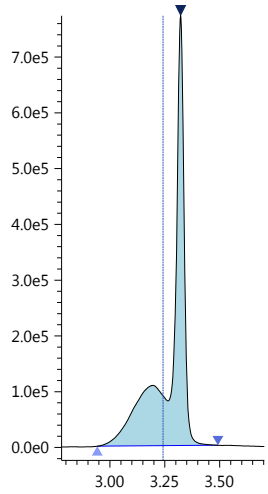
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.091	2674	658084	21	0.0730	ng/mL	0.1000
N-EtFOSAA-d5_IS	Auto	5.081	658084	658084	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.081	658084	4747642	26	4.7581	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.745	826931	826931	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.745	826931	4747642	26	4.7611	ng/mL	5.0000
N-EtFOSA	M	5.750	3085	826931	23	0.1052	ng/mL	0.1000
N-EtFOSE-d9_IS	Auto	5.710	780306	780306	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.710	780306	4747642	26	4.8051	ng/mL	5.0000
N-EtFOSE	Auto	5.722	18696	780306	24	0.0985	ng/mL	0.1000
13C7-PFUnDA_IS	Auto	5.064	4747642	4747642	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.195	8591	922222	16	0.0929	ng/mL	0.0941
PFNS	M	4.864	8143	663204	13	0.0968	ng/mL	0.0962

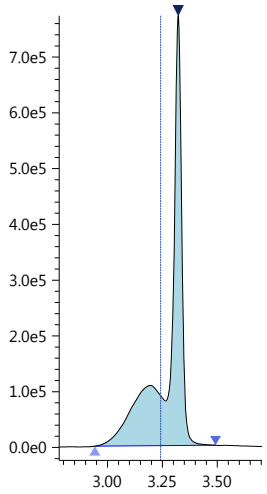
PFBA-13C_IS

Conc 5.0000
RT 3.322 Area 2985562
ISTD 216.90>172.15 (-) 7.74e5



PFBA-13C

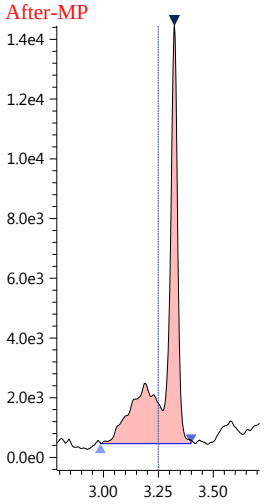
Conc 4.9008
RT 3.322 Area 2985562
Q 216.90>172.15 (-) 7.74e5



PFBA

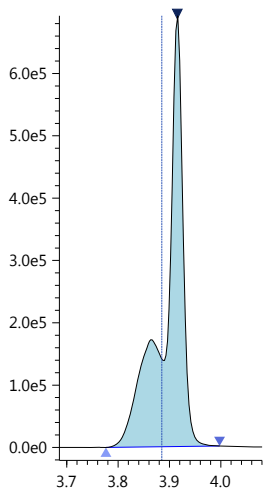
Conc 0.0936
RT 3.323 Area 49290
Q 213.00>169.10 (-) 1.45e4

After-MP



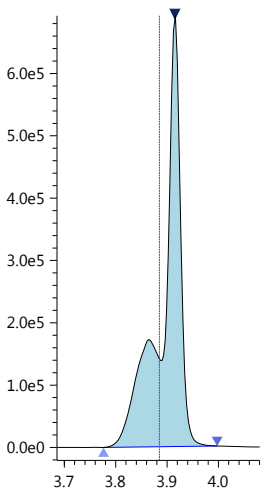
PFPeA-13C_IS

Conc 5.0000
RT 3.915 Area 1668115
ISTD 267.90>223.00 (-) 6.93e5



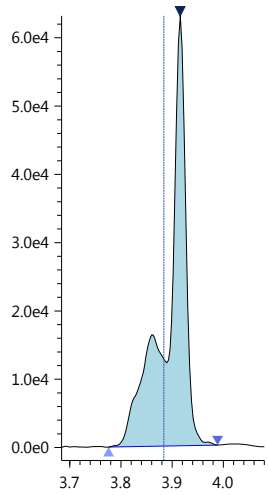
PFPeA-13C

Conc 4.9137
RT 3.915 Area 1668115
Q 267.90>223.00 (-) 6.93e5



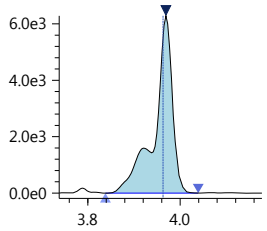
PFPeA

Conc 0.1064
RT 3.916 Area 154107
Q 263.05>219.10 (-) 6.32e4

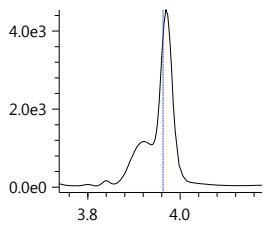


PFBS_1

Conc 0.0896
RT 3.969 Area 16836
R#1 70.32 (0.00)
Q 299.00>80.00 (-) 6.29e3

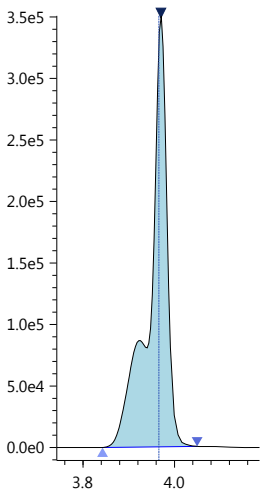


R1 298.80>99.00 (-) 4.54e3



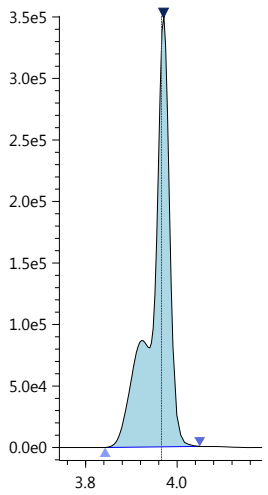
PFBS-13C

Conc 4.8539
RT 3.970 Area 922222
Q 301.80>80.00 (-) 3.51e5



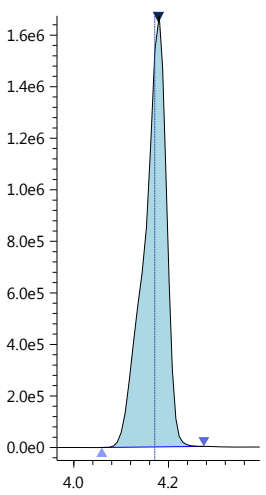
PFBS-13C_IS

Conc 5.0000
RT 3.970 Area 922222
ISTD 301.80>80.00 (-) 3.51e5



PFHxA-13C_IS

Conc 5.0000
RT 4.179 Area 5401395
ISTD 314.90>270.10 (-) 1.67e6



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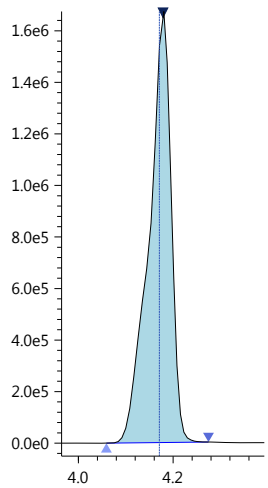
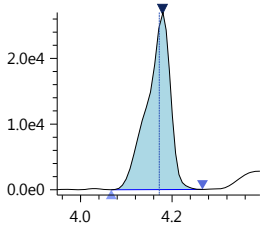
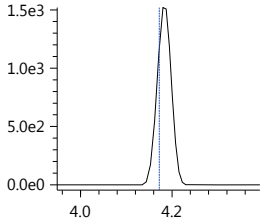
PFHxA-13C
Conc 4.7647
RT 4.179 Area 5401395
Q 314.90>270.10 (-) 1.67e6



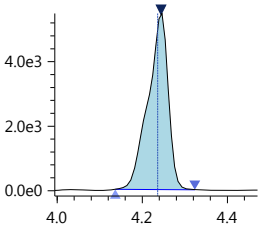
PFHxA
Conc 0.0966
RT 4.179 Area 93993
R#1 5.48 (0.00)
Q 313.00>269.00 (-) 2.70e4



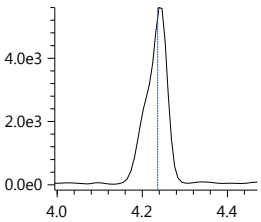
R1 313.00>119.10 (-) 1.52e3



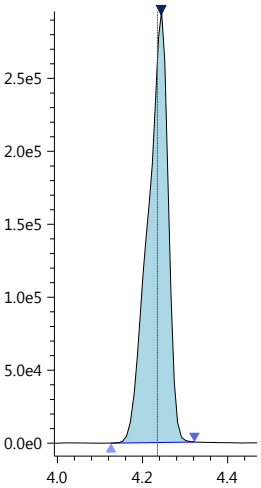
HPFO_DA
Conc 0.0993
RT 4.244 Area 17976
R#1 100.86 (0.00)
Q 329.00>169.00 (-) 5.49e3



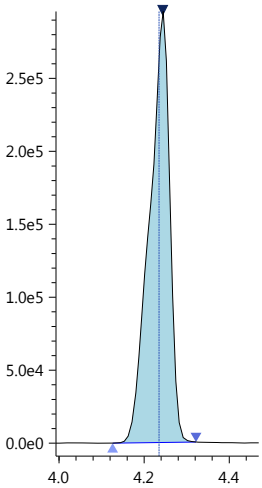
R1 329.00>285.10 (-) 5.60e3



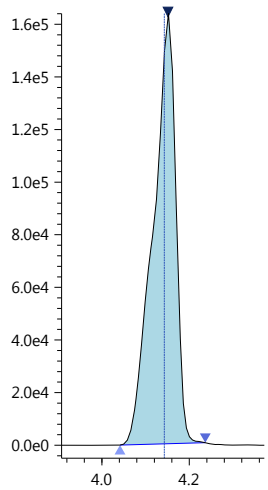
HFPO_DA-13C_IS
Conc 5.0000
RT 4.244 Area 976795
ISTD 332.00>286.80 (-) 2.96e5



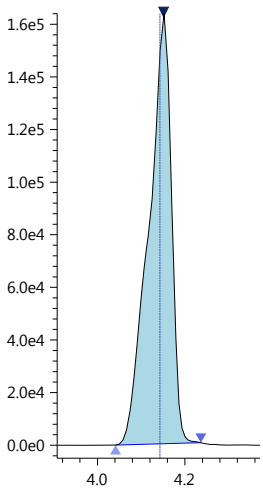
HFPO_DA-13C
Conc 4.8372
RT 4.244 Area 976795
Q 332.00>286.80 (-) 2.96e5



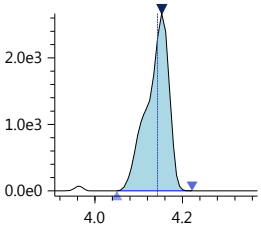
4_2-FTS-13C_IS
Conc 5.0000
RT 4.151 Area 585137
ISTD 328.80>309.05 (-) 1.64e5



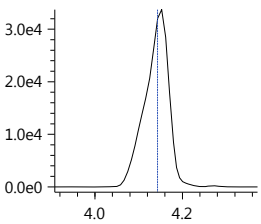
4_2-FTS-13C
Conc 5.0168
RT 4.151 Area 585137
Q 328.80>309.05 (-) 1.64e5



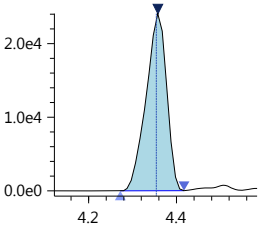
4_2-FTS_1
Conc 0.0910
RT 4.153 Area 9210
R#1 1263.24 (0.00)
Q 327.00>307.05 (-) 2.67e3



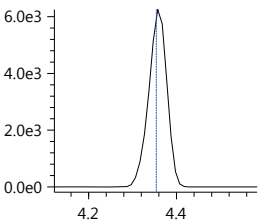
R1 327.00>81.10 (-) 3.37e4



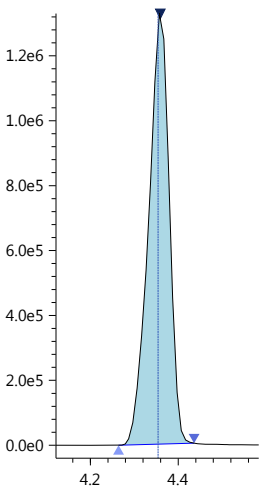
PFHpA
Conc 0.0836
RT 4.358 Area 78288
R#1 25.82 (0.00)
Q 362.90>319.00 (-) 2.41e4



R1 362.90>169.00 (-) 6.25e3



PFHpA-13C_IS
Conc 5.0000
RT 4.359 Area 4342761
ISTD 366.90>322.10 (-) 1.33e6



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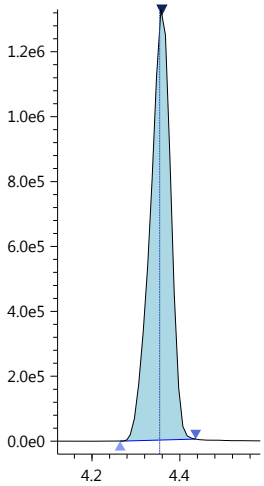
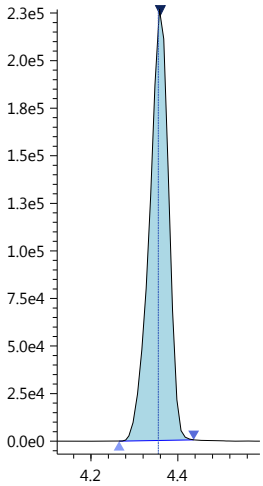
PFHpA-13C
Conc 5.1067
RT 4.359 Area 4342761

Q 366.90>322.10 (-) 1.33e6



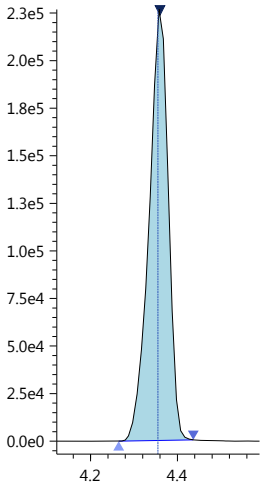
PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 700030

ISTD 402.70>84.05 (-) 2.27e5



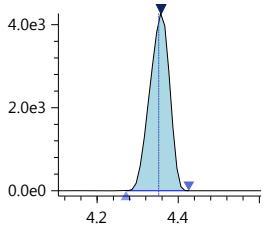
PFHxS-18O
Conc 5.3405
RT 4.360 Area 700030

Q 402.70>84.05 (-) 2.27e5

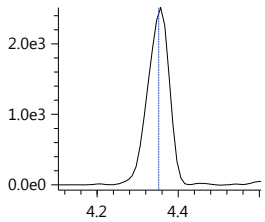


PFHxS_1
Conc 0.1093
RT 4.358 Area 14740
R#1 58.42 (0.00)

Q 399.00>80.00 (-) 4.27e3

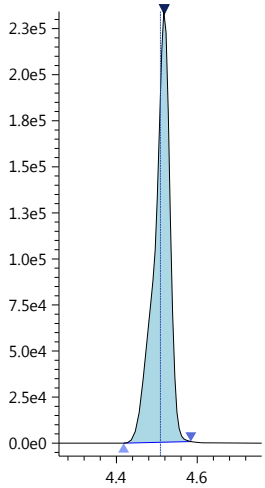


R1 399.00>99.00 (-) 2.52e3



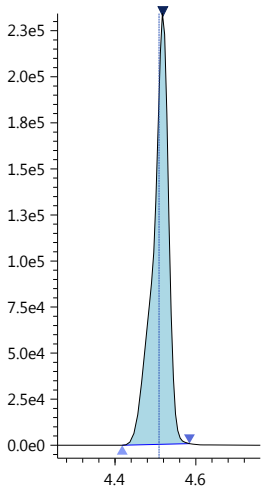
6_2-FTS-13C
Conc 5.2334
RT 4.518 Area 617173

Q 428.90>409.00 (-) 2.34e5



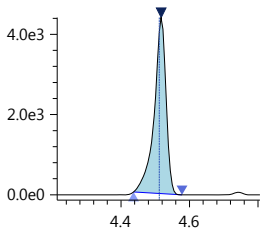
6_2-FTS-13C_IS
Conc 5.0000
RT 4.518 Area 617173

ISTD 428.90>409.00 (-) 2.34e5

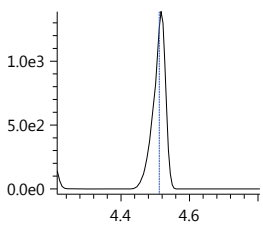


6_2-FTS_1
Conc 0.0926
RT 4.517 Area 10555
R#1 31.78 (0.00)

Q 427.00>407.00 (-) 4.42e3

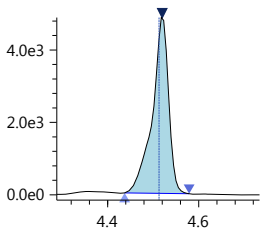


R1 427.00>80.90 (-) 1.39e3

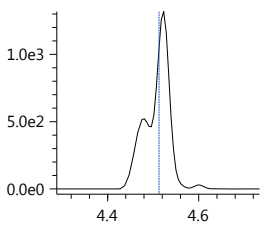


PFHpS_1
Conc 0.0855
RT 4.520 Area 12057
R#1 25.63 (0.00)

Q 449.00>80.15 (-) 4.90e3

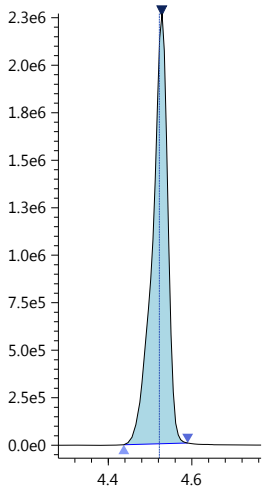


R1 449.00>99.20 (-) 1.32e3



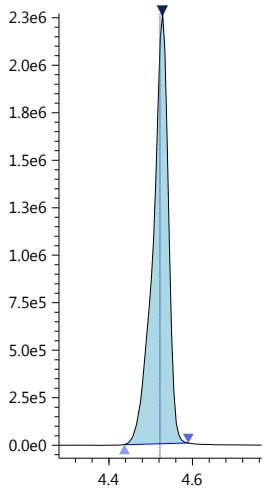
PFOA-13C_IS
Conc 5.0000
RT 4.528 Area 5777047

ISTD 416.80>372.05 (-) 2.27e6



PFOA-13C
Conc 5.0964
RT 4.528 Area 5777047

Q 416.80>372.05 (-) 2.27e6



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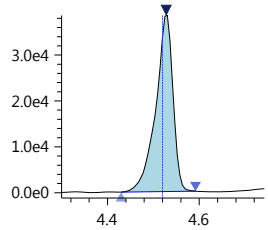
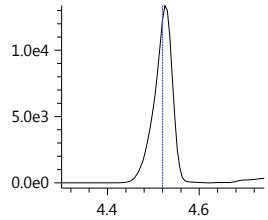
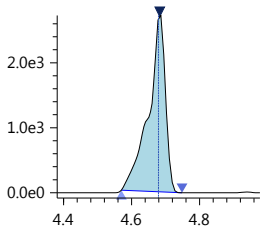
PFOA
Conc 0.1052
RT 4.528 Area 100323
R#1 33.42 (0.00)
Q 413.00>369.00 (-) 3.86e4



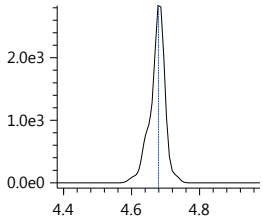
R1 413.00>169.10 (-) 1.34e4



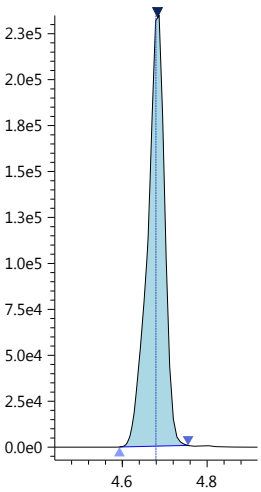
PFOS_1
Conc 0.0956
RT 4.683 Area 9347
R#1 106.28 (0.00)
Q 499.00>80.00 (-) 2.73e3



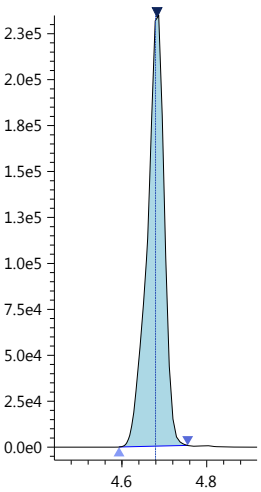
R1 499.00>99.00 (-) 2.84e3



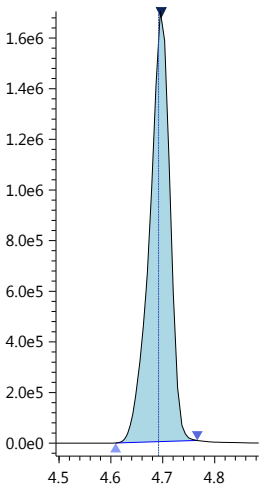
PFOS-13C_IS
Conc 5.0000
RT 4.683 Area 663204
ISTD 502.80>80.05 (-) 2.35e5



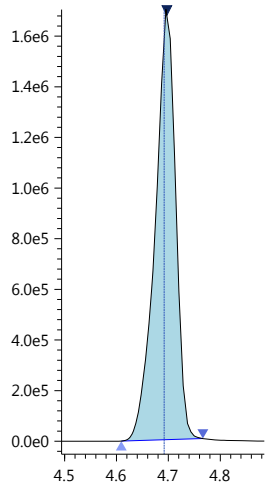
PFOS-13C
Conc 4.8478
RT 4.683 Area 663204
Q 502.80>80.05 (-) 2.35e5



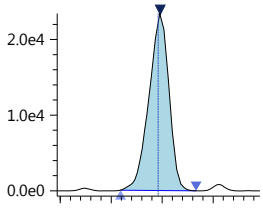
PFNA-13C_IS
Conc 5.0000
RT 4.697 Area 4657468
ISTD 467.80>423.00 (-) 1.71e6



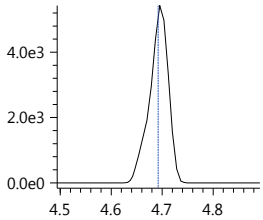
PFNA-13C
Conc 4.9380
RT 4.697 Area 4657468
Q 467.80>423.00 (-) 1.71e6



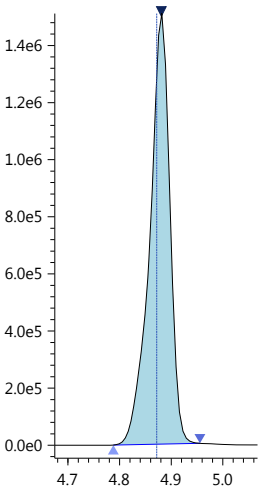
PFNA
Conc 0.1056
RT 4.696 Area 63629
R#1 23.09 (0.00)
Q 463.00>418.90 (-) 2.34e4



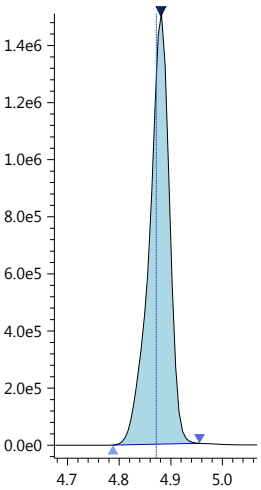
R1 463.00>219.00 (-) 5.43e3



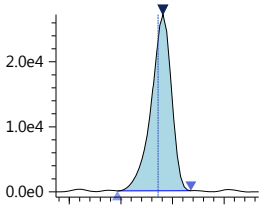
PFDA-13C_IS
Conc 5.0000
RT 4.881 Area 4090702
ISTD 514.80>469.95 (-) 1.51e6



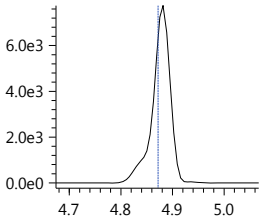
PFDA-13C
Conc 4.9682
RT 4.881 Area 4090702
Q 514.80>469.95 (-) 1.51e6



PFDA
Conc 0.1075
RT 4.881 Area 73648
R#1 28.68 (0.00)
Q 513.00>468.80 (-) 2.73e4



R1 513.00>219.10 (-) 7.74e3



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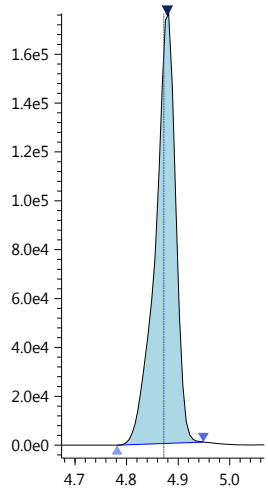
8_2-FTS-13C_IS

Conc 5.0000
RT 4.879 Area 481552

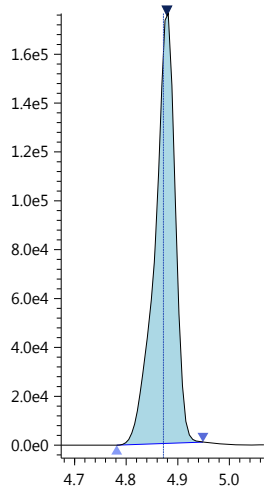
ISTD 528.80>509.00 (-) 1.77e5



8_2-FTS-13C

Conc 5.2506
RT 4.879 Area 481552

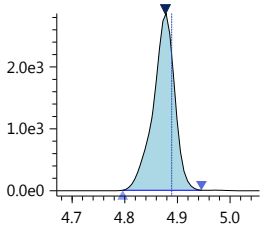
Q 528.80>509.00 (-) 1.77e5



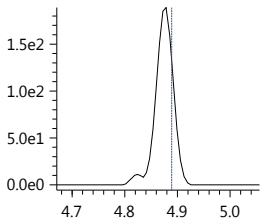
8_2-FTS_1

Conc 0.0953
RT 4.877 Area 8090
R#1 6.64 (0.00)

Q 527.10>506.90 (-) 2.86e3



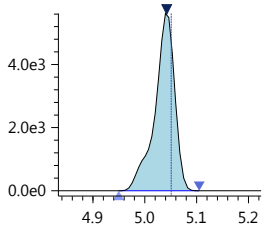
R1 527.20>487.00 (-) 1.89e2



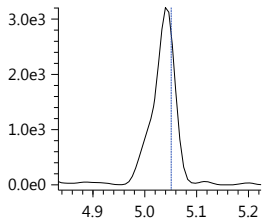
PFDS_1

Conc 0.1228
RT 5.042 Area 14980
R#1 56.17 (0.00)

Q 599.00>79.90 (-) 5.62e3



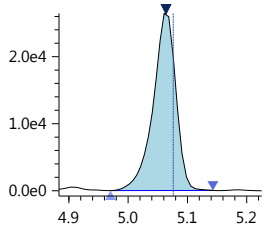
R1 599.00>99.10 (-) 3.21e3



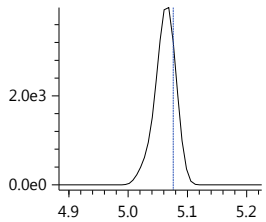
PFUnA

Conc 0.1094
RT 5.064 Area 70962
R#1 14.90 (0.00)

Q 563.00>518.90 (-) 2.64e4



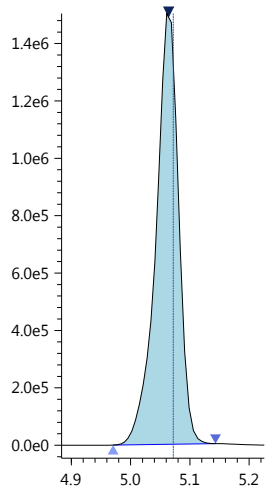
R1 563.00>219.00 (-) 3.99e3



PFUnA-13C_IS

Conc 5.0000
RT 5.064 Area 4003894

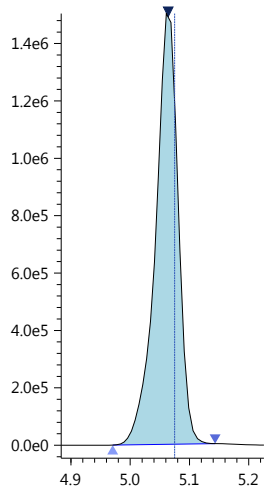
ISTD 564.80>519.95 (-) 1.50e6



PFUnA-13C

Conc 5.1971
RT 5.064 Area 4003894

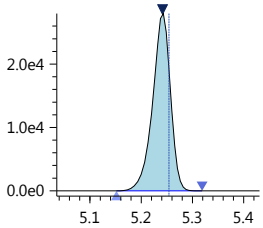
Q 564.80>519.95 (-) 1.50e6



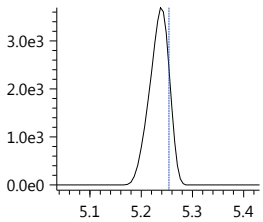
PFDoA

Conc 0.1192
RT 5.242 Area 67583
R#1 13.45 (0.00)

Q 613.05>569.00 (-) 2.80e4



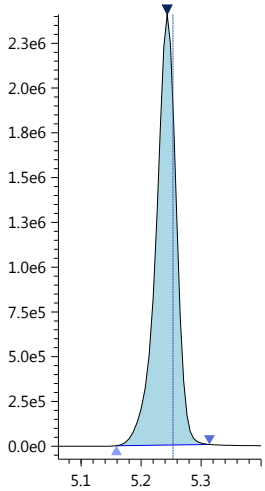
R1 613.05>169.00 (-) 3.70e3



PFDoA-13C

Conc 5.0410
RT 5.243 Area 5635046

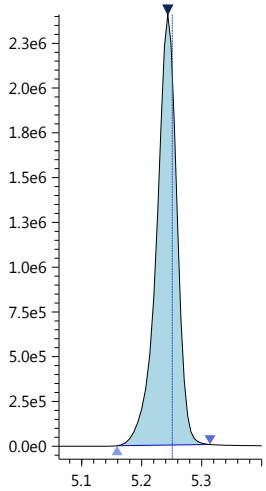
Q 614.80>569.95 (-) 2.41e6



PFDoA-13C_IS

Conc 5.0000
RT 5.243 Area 5635046

ISTD 614.80>569.95 (-) 2.41e6



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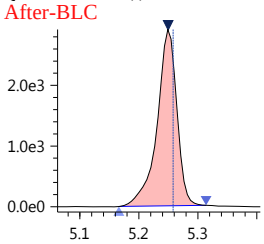
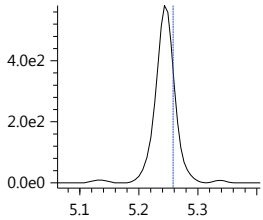
10_2-FtS_1

Conc 0.0981
RT 5.250 Area 6754
R#1 19.17 (0.00)

Q 627.00>606.95 (-) 2.92e3



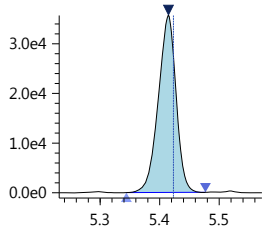
R1 627.00>81.25 (-) 5.81e2



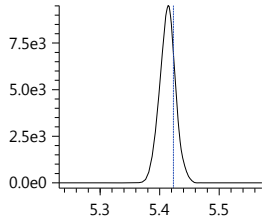
PFTrDA

Conc 0.0976
RT 5.415 Area 74226
R#1 27.61 (0.00)

Q 663.00>618.90 (-) 3.57e4



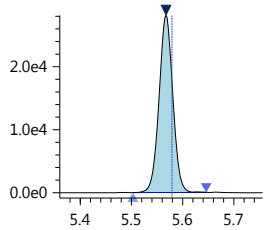
R1 662.90>169.00 (-) 9.51e3



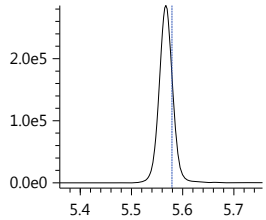
PFTeDA

Conc 0.0947
RT 5.568 Area 52609
R#1 1025.86 (0.00)

Q 713.40>669.00 (-) 2.81e4



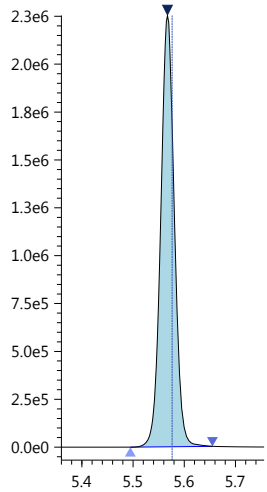
R1 713.40>169.10 (-) 2.86e5



PFTeDA-13C

Conc 5.1970
RT 5.567 Area 4156880

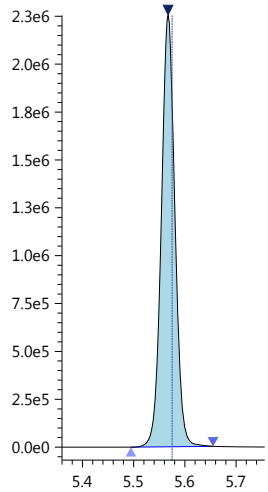
Q 714.70>669.90 (-) 2.25e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.567 Area 4156880

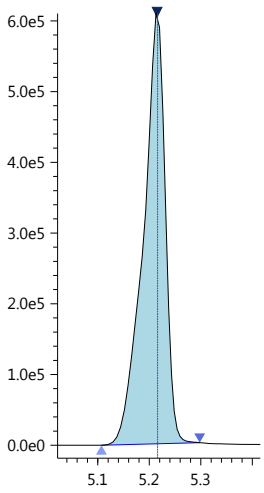
ISTD 714.70>669.90 (-) 2.25e6



FOSA-13C_IS

Conc 5.0000
RT 5.215 Area 1800483

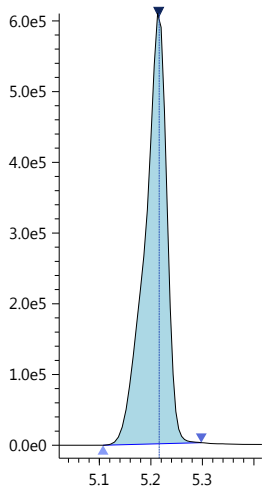
ISTD 506.00>78.05 (-) 6.10e5



FOSA-13C

Conc 4.9463
RT 5.215 Area 1800483

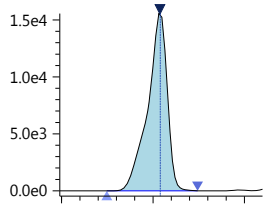
Q 506.00>78.05 (-) 6.10e5



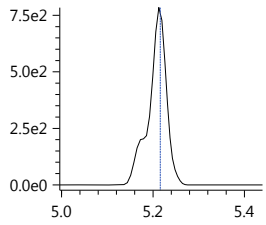
FOSA

Conc 0.0958
RT 5.215 Area 46099
R#1 5.11 (0.00)

Q 498.20>78.00 (-) 1.56e4



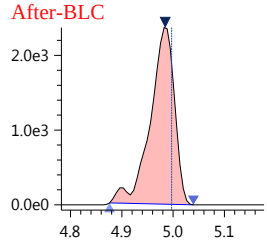
R1 498.20>64.10 (-) 7.84e2



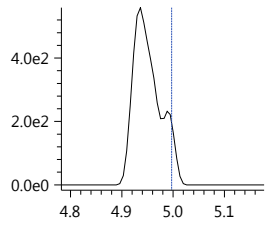
N-MeFOSAA

Conc 0.1033
RT 4.985 Area 7761
R#1 9.92 (0.00)

Q 570.20>419.00 (-) 2.37e3



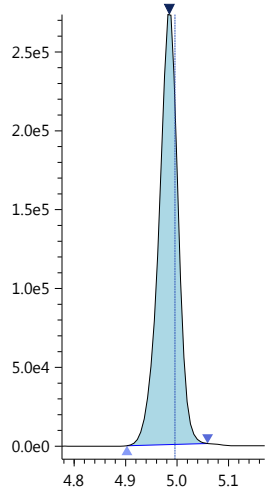
R1 570.20>512.00 (-) 5.59e2



N-MeFOSAA-d3

Conc 4.9762
RT 4.985 Area 716898

Q 572.80>419.05 (-) 2.74e5



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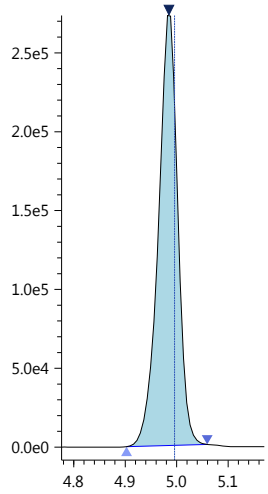
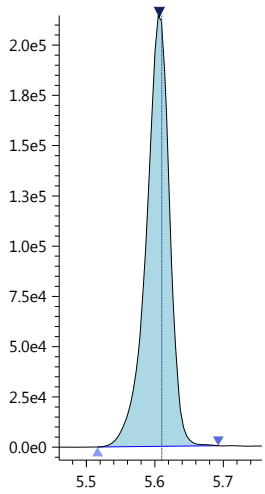
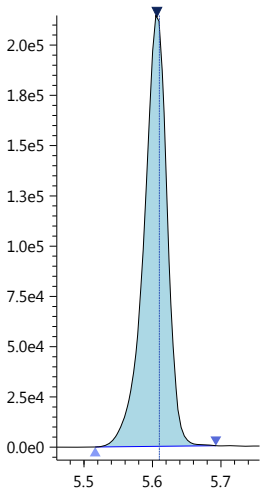
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.985 Area 716898
ISTD 572.80>419.05 (-) 2.74e5



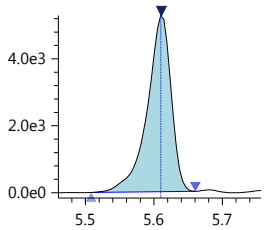
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.607 Area 509700
ISTD 514.90>168.90 (-) 2.15e5



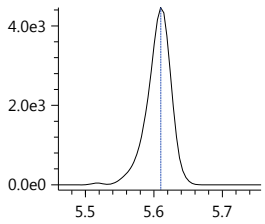
N-MeFOSA-d3
Conc 4.9207
RT 5.607 Area 509700
Q 514.90>168.90 (-) 2.15e5



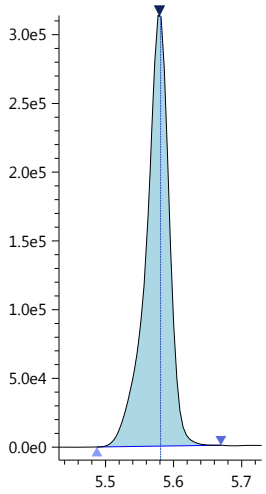
N-MeFOSA
Conc 0.0949
RT 5.611 Area 12776
R#1 85.14 (0.00)
Q 512.00>169.10 (-) 5.30e3



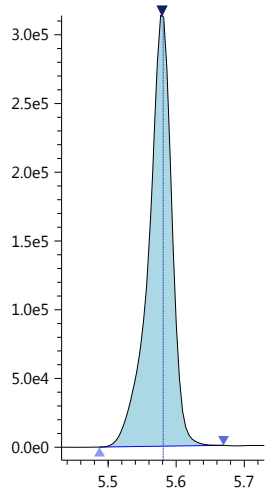
R1 512.00>219.00 (-) 4.46e3



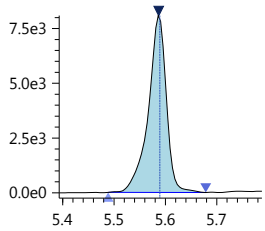
N-MeFOSE-d7
Conc 4.9421
RT 5.579 Area 743639
Q 622.70>59.10 (-) 3.14e5



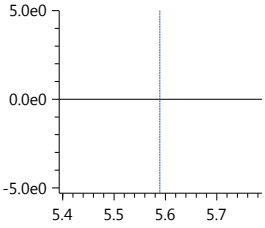
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.579 Area 743639
ISTD 622.70>59.10 (-) 3.14e5



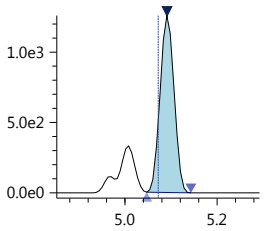
N-MeFOSE
Conc 0.0909
RT 5.587 Area 19647
R#1 0.00 (0.00)
Q 616.00>59.00 (-) 8.09e3



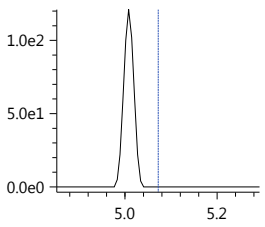
R1 556.00>121.20 (-) 0.00e0



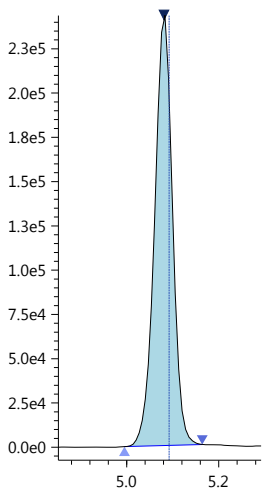
N-EtFOSAA
Conc 0.0730
RT 5.091 Area 2674
R#1 0.00 (0.00)
Q 584.20>418.95 (-) 1.26e3



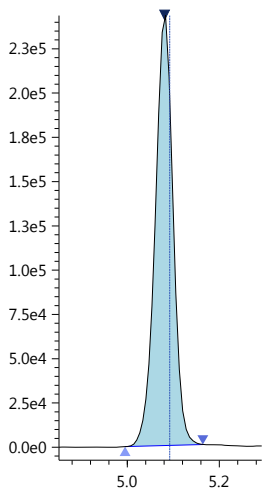
R1 584.20>526.10 (-) 1.21e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.081 Area 658084
ISTD 588.80>419.00 (-) 2.44e5



N-EtFOSAA-d5
Conc 4.7581
RT 5.081 Area 658084
Q 588.80>419.00 (-) 2.44e5



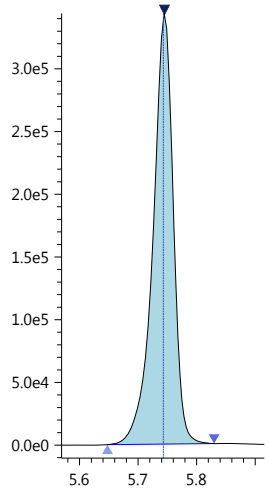
Insight Report

Printed at 1/7/2019 12:54:42 PM

N-EtFOSA-d9_IS

Conc 5.0000
RT 5.745 Area 826931

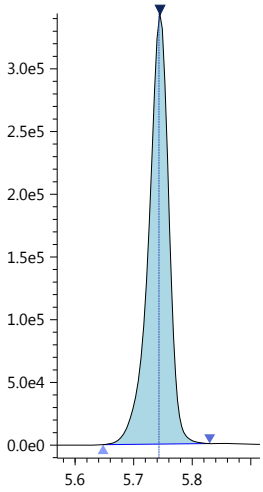
ISTD 530.90>169.15 (-) 3.44e5



N-EtFOSA-d9

Conc 4.7611
RT 5.745 Area 826931

Q 530.90>169.15 (-) 3.44e5

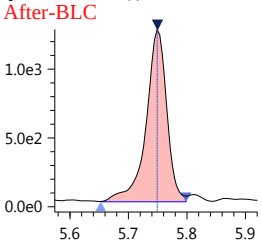


N-EtFOSA

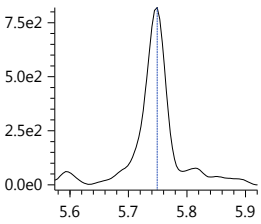
Conc 0.1052
RT 5.750 Area 3085
R#1 62.29 (0.00)

Q 526.90>169.10 (-) 1.29e3

After-BLC



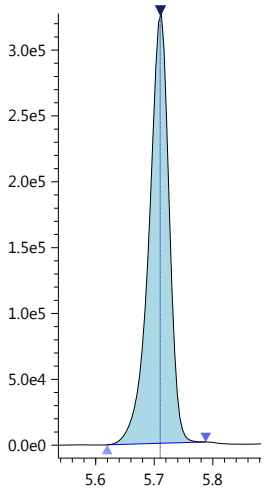
R1 526.90>219.00 (-) 8.20e2



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.710 Area 780306

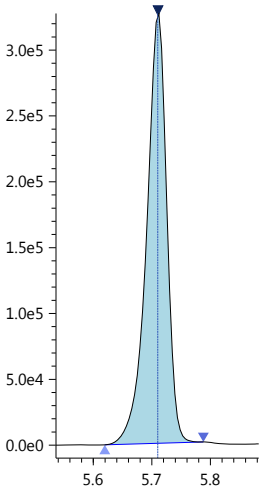
ISTD 638.70>59.10 (-) 3.28e5



N-EtFOSE-d9

Conc 4.8051
RT 5.710 Area 780306

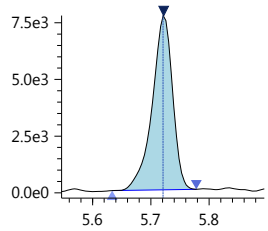
Q 638.70>59.10 (-) 3.28e5



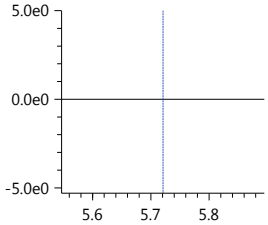
N-EtFOSE

Conc 0.0985
RT 5.722 Area 18696
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 7.82e3



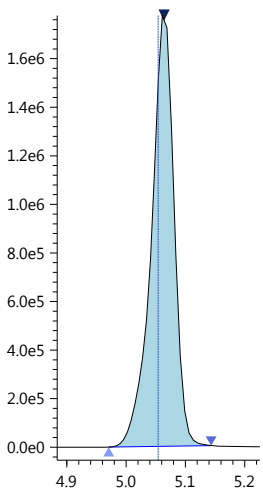
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.064 Area 4747642

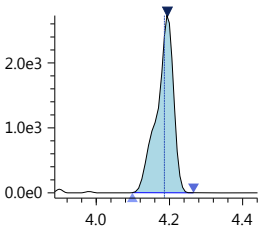
ISTD 570.00>525.00 (-) 1.78e6



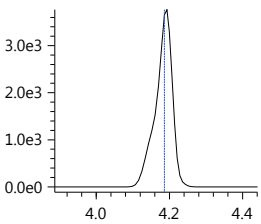
PFPeS

Conc 0.0929
RT 4.195 Area 8591
R#1 138.44 (0.00)

Q 349.00>99.00 (-) 2.73e3



R1 349.00>79.95 (-) 3.77e3

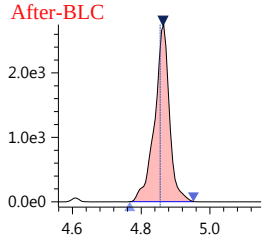


PFNS

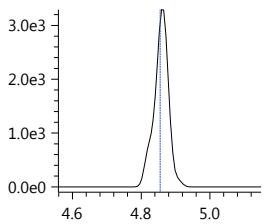
Conc 0.0968
RT 4.864 Area 8143
R#1 123.56 (0.00)

Q 549.00>99.00 (-) 2.75e3

After-BLC



R1 549.00>79.95 (-) 3.29e3



Insight Report

Printed at 1/7/2019 10:13:37 AM

010419_017

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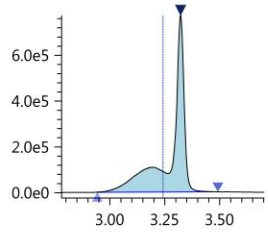
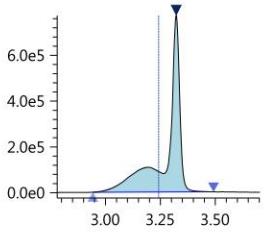
Date acquired: 1/4/2019 5:16:36 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_017.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

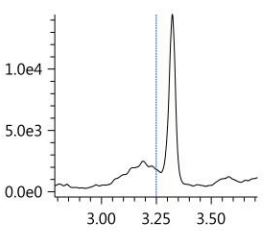
PFBA-13C_IS
Conc 5.0000
RT 3.322 Area 2985562
ISTD 216.90>172.15 (-) 7.74e5



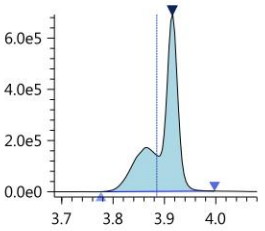
PFBA-13C
Conc 5.1249
RT 3.322 Area 2985562
Q 216.90>172.15 (-) 7.74e5



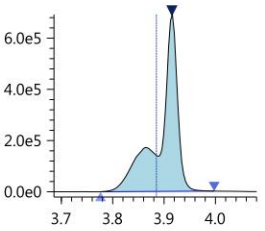
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.45e4



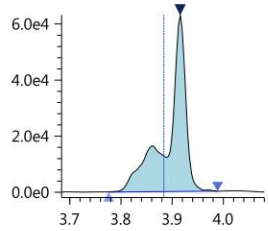
PFPeA-13C_IS
Conc 5.0000
RT 3.915 Area 1668115
ISTD 267.90>223.00 (-) 6.93e5



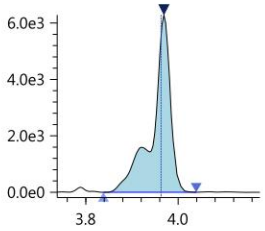
PFPeA-13C
Conc 5.0961
RT 3.915 Area 1668115
Q 267.90>223.00 (-) 6.93e5



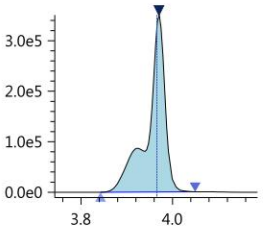
PFPeA
Conc 0.0825
RT 3.916 Area 154107
Q 263.05>219.10 (-) 6.32e4



PFBS_1
Conc 0.0947
RT 3.969 Area 16836
Q 299.00>80.00 (-) 6.29e3



PFBS-13C
Conc 5.0342
RT 3.970 Area 922222
Q 301.80>80.00 (-) 3.51e5



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RT 3.970 Area 922222
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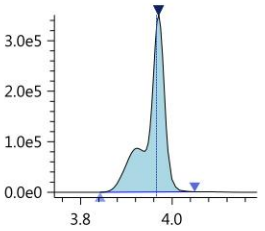
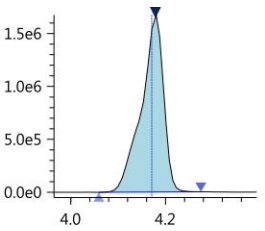


PFHxA-13C_IS
Conc 5.0000
RT 4.179 Area 5401395
ISTD 314.90>270.10 (-) 1.67e6



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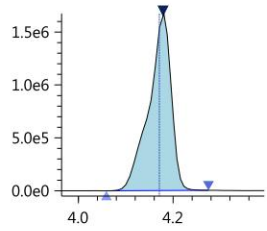
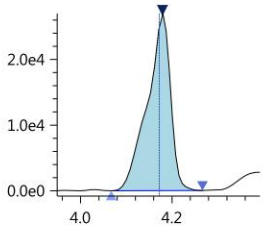
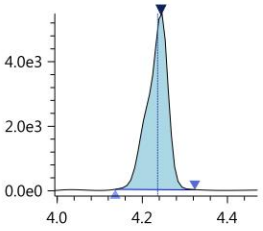
RT 4.179 Area 5401395
Q 314.90>270.10 (-) 1.67e6



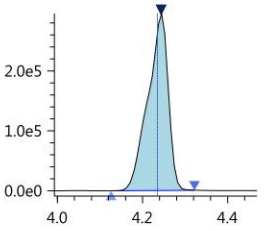
PFHxA
Conc 0.0964
RT 4.179 Area 93993
Q 313.00>269.00 (-) 2.70e4



HPFO_DA
Conc 0.1025
RT 4.244 Area 17976
Q 329.00>169.00 (-) 5.49e3



HFPO_DA-13C_IS
Conc 5.0000
RT 4.244 Area 976795
ISTD 332.00>286.80 (-) 2.96e5



HFPO_DA-13C
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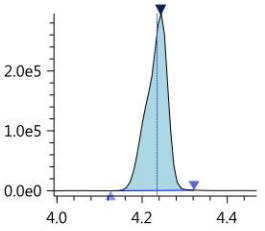
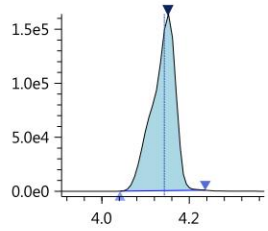
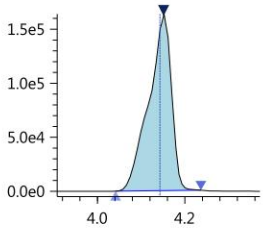
Q 332.00>286.80 (-) 2.96e5



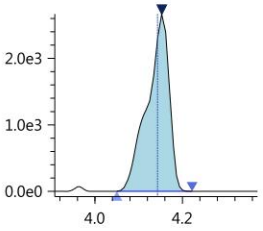
4_2-FTS-13C_IS
Conc 5.0000
RT 4.151 Area 585137
ISTD 328.80>309.05 (-) 1.64e5



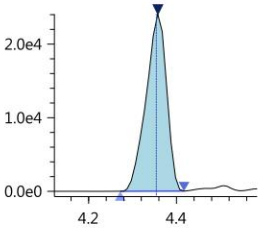
4_2-FTS-13C
Conc 5.2280
RT 4.151 Area 585137
Q 328.80>309.05 (-) 1.64e5



4_2-FTS_1
Conc 0.1026
RT 4.153 Area 9210
Q 327.00>307.05 (-) 2.67e3



PFHpA
Conc 0.0820
RT 4.358 Area 78288
Q 362.90>319.00 (-) 2.41e4



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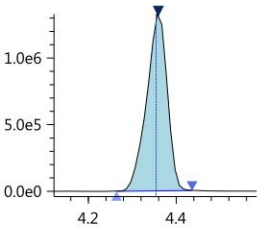
RT 4.359 Area 4342761
ISTD 366.90>322.10 (-) 1.33e6



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Printed at 1/7/2019 10:13:37 AM

PFHpA-13C
Conc 5.0971
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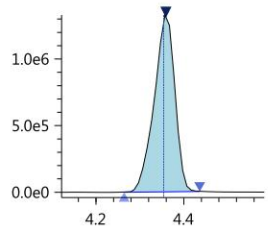
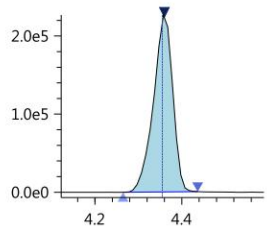
Q 366.90>322.10 (-) 1.33e6



PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 700030
ISTD 402.70>84.05 (-) 2.27e5



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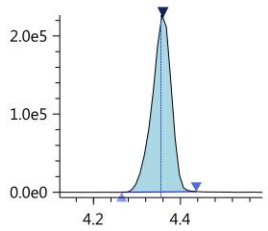
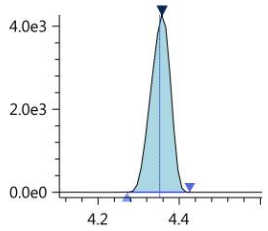
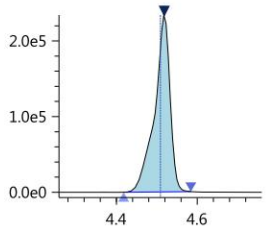


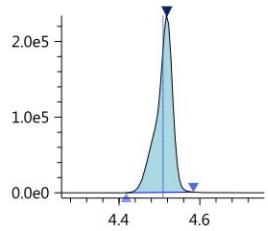
PFHxS_1
Conc 0.1088
RT 4.358 Area 14740
Q 399.00>80.00 (-) 4.27e3



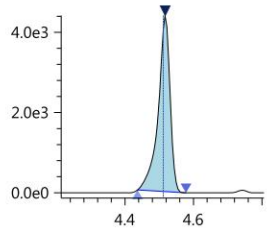
6_2-FTS-13C
Conc 4.9844
RT 4.518 Area 617173
Q 428.90>409.00 (-) 2.34e5



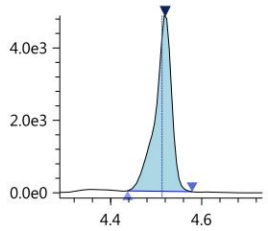
6_2-FTS-13C_IS
Conc 5.0000
RT 4.518 Area 617173
ISTD 428.90>409.00 (-) 2.34e5



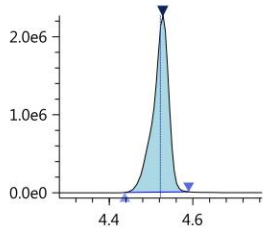
6_2-FTS_1
Conc 0.0922
RT 4.517 Area 10555
Q 427.00>407.00 (-) 4.42e3



PFHpS_1
Conc 0.0929
RT 4.520 Area 12057
Q 449.00>80.15 (-) 4.90e3



PFOA-13C_IS
Conc 5.0000
RT 4.528 Area 5777047
ISTD 416.80>372.05 (-) 2.27e6



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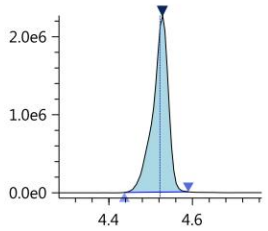
Conc 5.0573
RT 4.528 Area 5777047
Q 416.80>372.05 (-) 2.27e6



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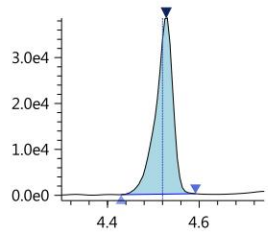
RT 4.528 Area 100323
Q 413.00>369.00 (-) 3.86e4



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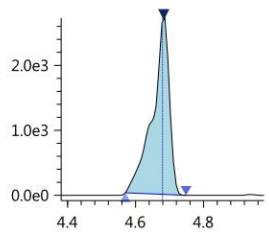
Conc 0.0956
RT 4.683 Area 9347
Q 499.00>80.00 (-) 2.73e3



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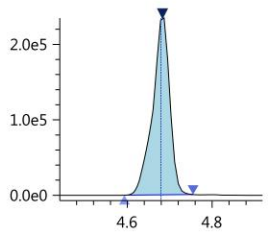
RT 4.683 Area 663204
ISTD 502.80>80.05 (-) 2.35e5



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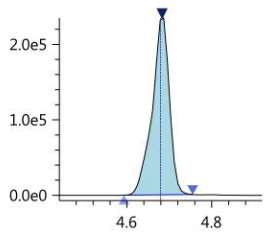
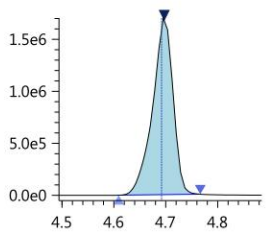
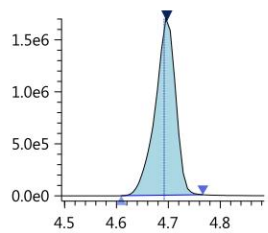
RT 4.683 Area 663204
Q 502.80>80.05 (-) 2.35e5



PFNA-13C_IS
Conc 5.0000
RT 4.697 Area 4657468
ISTD 467.80>423.00 (-) 1.71e6



PFNA-13C
Conc 4.8863
RT 4.697 Area 4657468
Q 467.80>423.00 (-) 1.71e6



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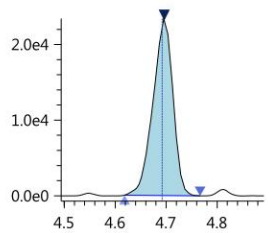
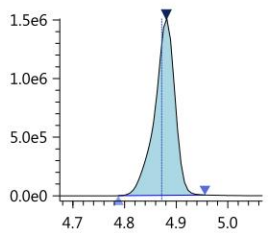
RT 4.696 Area 63629
Q 463.00>418.90 (-) 2.34e4



PFDA-13C_IS
Conc 5.0000
RT 4.881 Area 4090702
ISTD 514.80>469.95 (-) 1.51e6



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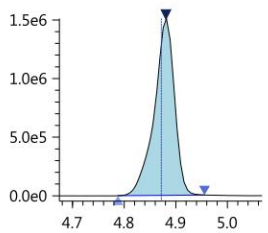
Q 514.80>469.95 (-) 1.51e6



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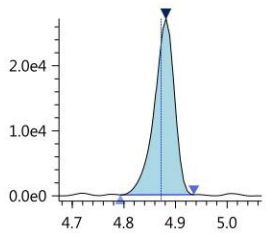
Conc 0.1026
RT 4.881 Area 73648
Q 513.00>468.80 (-) 2.73e4



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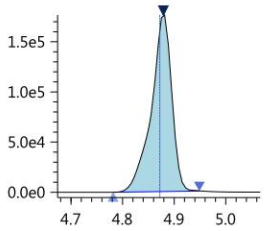
8_2-FTS-13C_IS
Conc 5.0000
RT 4.879 Area 481552
ISTD 528.80>509.00 (-) 1.77e5



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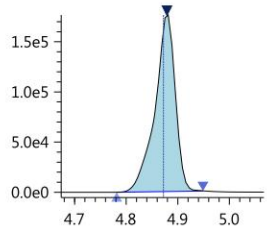
Q 528.80>509.00 (-) 1.77e5



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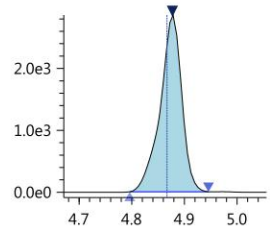

PFDS_1
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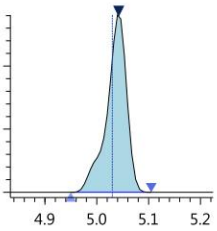
Q 599.00>79.90 (-) 5.62e3



PFUnA
Conc 0.1029
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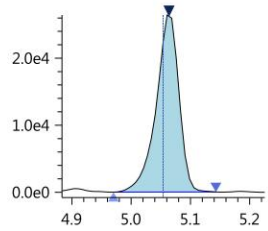
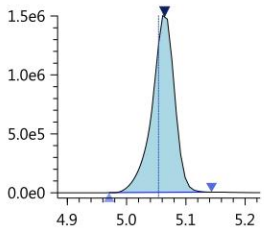
Q 563.00>518.90 (-) 2.64e4



PFUnA-13C_IS
Conc 5.0000
RT 5.064 Area 4003894
ISTD 564.80>519.95 (-) 1.50e6



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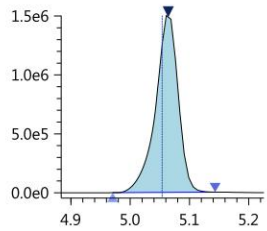
Q 564.80>519.95 (-) 1.50e6



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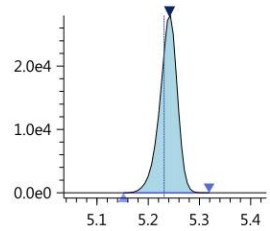
Conc 0.1148
RT 5.242 Area 67583
Q 613.05>569.00 (-) 2.80e4



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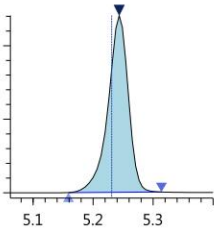
Conc 5.0791
RT 5.243 Area 5635046
Q 614.80>569.95 (-) 2.41e6



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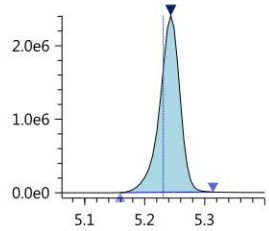
ISTD 614.80>569.95 (-) 2.41e6



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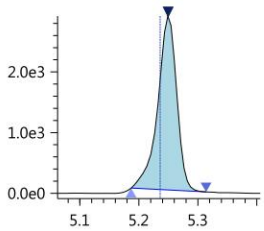
Q 627.00>606.95 (-) 2.92e3



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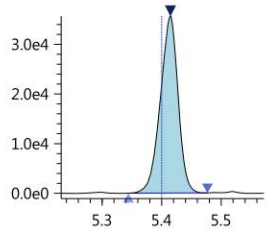
Conc 0.0945
RT 5.415 Area 74226
Q 663.00>618.90 (-) 3.57e4



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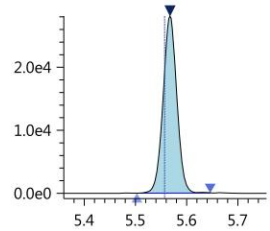
Conc 0.0761
RT 5.568 Area 52609
Q 713.40>669.00 (-) 2.81e4



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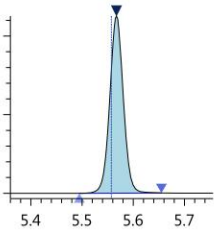
Conc 5.2191
RT 5.567 Area 4156880
Q 714.70>669.90 (-) 2.25e6



PFTeDA-13C_IS
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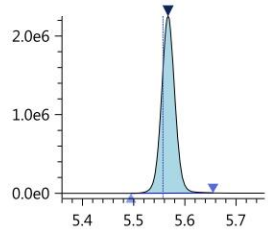
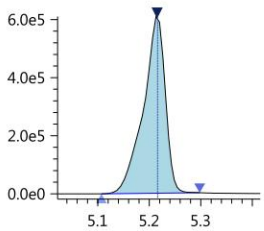
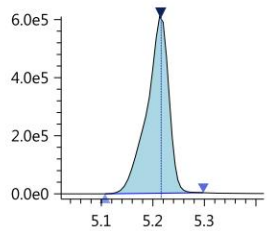


FOSA-13C_IS
Conc 5.0000
RT 5.215 Area 1800483
ISTD 506.00>78.05 (-) 6.10e5



FOSA-13C
Conc 5.0862
RT 5.215 Area 1800483
Q 506.00>78.05 (-) 6.10e5



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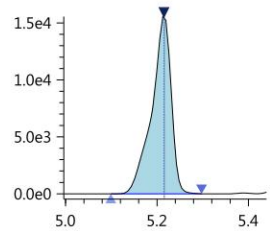
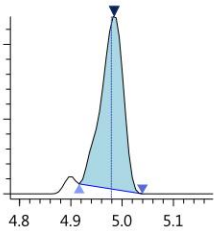
Conc 0.0970
RT 5.215 Area 46099
Q 498.20>78.00 (-) 1.56e4



N-MeFOSAA
Conc 0.1168
RT 4.985 Area 7019
Q 570.20>419.00 (-) 2.37e3



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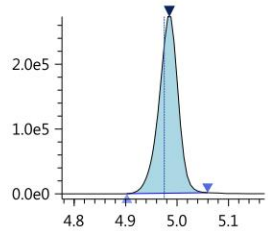
Conc 5.3021
RT 4.985 Area 716898
Q 572.80>419.05 (-) 2.74e5



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Conc 5.0000
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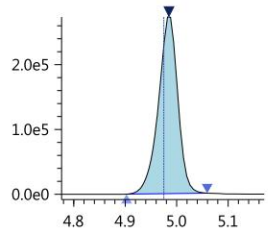
ISTD 572.80>419.05 (-) 2.74e5



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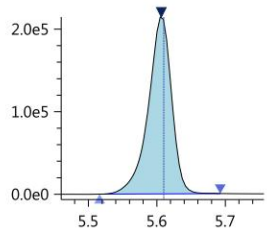
RT 5.607 Area 509700
ISTD 514.90>168.90 (-) 2.15e5



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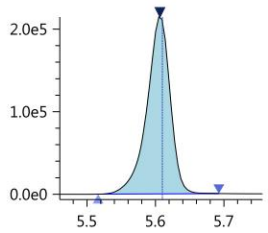
RT 5.607 Area 509700
Q 514.90>168.90 (-) 2.15e5



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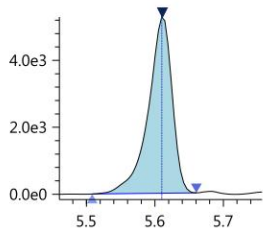
Conc 0.0919
RT 5.611 Area 12776
Q 512.00>169.10 (-) 5.30e3



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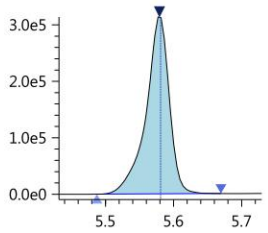
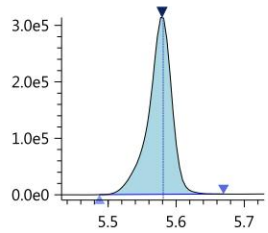
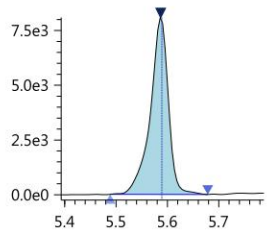
Conc 5.1410
RT 5.579 Area 743639
Q 622.70>59.10 (-) 3.14e5



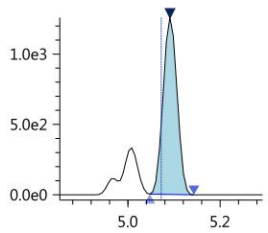
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.579 Area 743639
ISTD 622.70>59.10 (-) 3.14e5



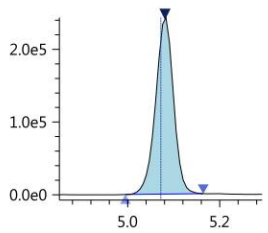
N-MeFOSE
Conc 0.0900
RT 5.587 Area 19647
Q 616.00>59.00 (-) 8.09e3



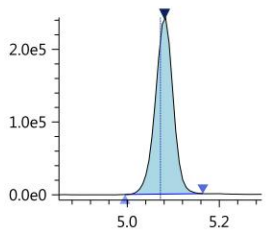
N-EtFOSAA
Conc 0.0844
RT 5.091 Area 2674
Q 584.20>418.95 (-) 1.26e3



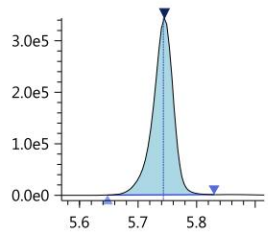
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.081 Area 658084
ISTD 588.80>419.00 (-) 2.44e5



N-EtFOSAA-d5
Conc 5.1187
RT 5.081 Area 658084
Q 588.80>419.00 (-) 2.44e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.745 Area 826931
ISTD 530.90>169.15 (-) 3.44e5



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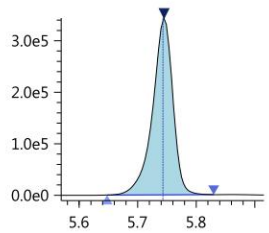
Conc 4.9972
RT 5.745 Area 826931
Q 530.90>169.15 (-) 3.44e5



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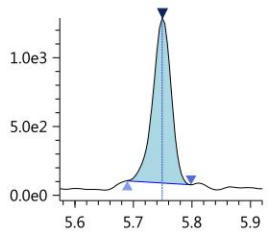
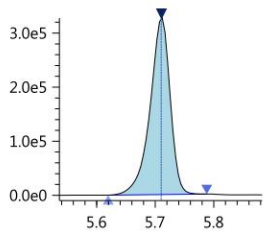
Conc 0.0938
RT 5.750 Area 2649
Q 526.90>169.10 (-) 1.29e3



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.710 Area 780306
ISTD 638.70>59.10 (-) 3.28e5



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Conc 5.1473
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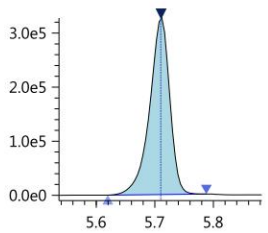
Q 638.70>59.10 (-) 3.28e5



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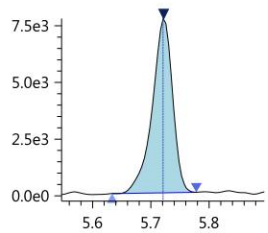
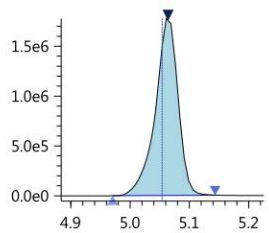
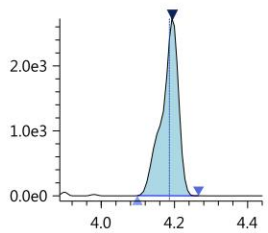
Conc 0.0996
RT 5.722 Area 18696
Q 630.00>58.90 (-) 7.82e3



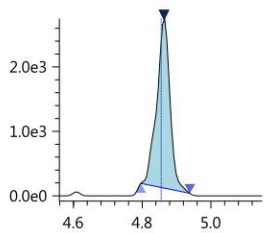
13C7-PFUnDA_IS
Conc 5.0000
RT 5.064 Area 4747642
ISTD 570.00>525.00 (-) 1.78e6



PFPeS
Conc 0.1200
RT 4.195 Area 8591
Q 349.00>99.00 (-) 2.73e3



PFNS
Conc 0.1073
RT 4.864 Area 7060
Q 549.00>99.00 (-) 2.75e3



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_018

Sample ID: 0.50 PPB ICAL
Date acquired: 1/4/2019 5:27:04 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_018.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.323	2944193	2944193	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.323	2944193	4687359	26	4.8950	ng/mL	5.0000
PFBA	M	3.324	256266	2944193	2	0.4935	ng/mL	0.5000
PFPeA-13C_IS	Auto	3.916	1638518	1638518	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.916	1638518	4687359	26	4.8886	ng/mL	5.0000
PFPeA	Auto	3.916	462520	1638518	4	0.4955	ng/mL	0.5000
PFBS_1	Auto	3.970	81796	896026	16	0.4481	ng/mL	0.4437
PFBS-13C	Auto	3.971	896026	4687359	26	4.7767	ng/mL	5.0000
PFBS-13C_IS	Auto	3.971	896026	896026	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.180	5558292	5558292	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.180	5558292	4687359	26	4.9661	ng/mL	5.0000
PFHxA	Auto	4.180	486757	5558292	6	0.4947	ng/mL	0.5000
HPFO_DA	Auto	4.245	87613	986293	3	0.4791	ng/mL	0.5000
HFPO_DA-13C_IS	Auto	4.245	986293	986293	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.245	986293	4687359	26	4.9470	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.153	555702	555702	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.153	555702	4687359	26	4.8257	ng/mL	5.0000
4_2-FTS_1	Auto	4.152	46765	555702	5	0.4867	ng/mL	0.4686
PFHpA	Auto	4.360	431361	3860045	8	0.5226	ng/mL	0.5000
PFHpA-13C_IS	Auto	4.360	3860045	3860045	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.360	3860045	4687359	26	4.5975	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.360	626151	626151	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.360	626151	4687359	26	4.8384	ng/mL	5.0000
PFHxS_1	Auto	4.354	50406	626151	7	0.4178	ng/mL	0.4565
6_2-FTS-13C	Auto	4.520	614501	4687359	26	5.2777	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.520	614501	614501	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.520	54931	614501	10	0.4838	ng/mL	0.4756
PFHpS_1	Auto	4.521	59756	626151	7	0.4735	ng/mL	0.4767
PFOA-13C_IS	Auto	4.530	5850886	5850886	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.530	5850886	4687359	26	5.2279	ng/mL	5.0000
PFOA	Auto	4.530	440275	5850886	9	0.4583	ng/mL	0.5000
PFOS_1	Auto	4.684	40855	642272	13	0.4313	ng/mL	0.4646
PFOS-13C_IS	Auto	4.685	642272	642272	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.685	642272	4687359	26	4.7552	ng/mL	5.0000
PFNA-13C_IS	Auto	4.699	4864669	4864669	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.699	4864669	4687359	26	5.2240	ng/mL	5.0000
PFNA	Auto	4.698	329039	4864669	11	0.5107	ng/mL	0.5000
PFDA-13C_IS	Auto	4.884	4209248	4209248	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.884	4209248	4687359	26	5.1779	ng/mL	5.0000
PFDA	Auto	4.884	327613	4209248	12	0.4649	ng/mL	0.5000
8_2-FTS-13C_IS	Auto	4.881	474994	474994	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.881	474994	4687359	26	5.2457	ng/mL	5.0000
8_2-FTS_1	Auto	4.881	39765	474994	15	0.4749	ng/mL	0.4800
PFDS_1	Auto	5.044	53470	642272	13	0.4528	ng/mL	0.4823
PFUnA	Auto	5.067	283410	3769464	14	0.4650	ng/mL	0.5000
PFUnA-13C_IS	Auto	5.067	3769464	3769464	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.067	3769464	4687359	26	4.9558	ng/mL	5.0000
PFDoA	Auto	5.247	265923	5770077	17	0.4305	ng/mL	0.5000
PFDoA-13C	Auto	5.246	5770077	4687359	26	5.2282	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.246	5770077	5770077	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.252	33720	474994	15	0.4964	ng/mL	0.4831
PFTrDA	Auto	5.417	350387	4020543	22	0.4841	ng/mL	0.5000
PFTeDA	Auto	5.569	137751	4020543	22	0.4463	ng/mL	0.5000
PFTeDA-13C	Auto	5.570	4020543	4687359	26	5.0912	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.570	4020543	4020543	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.218	1744787	1744787	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.218	1744787	4687359	26	4.8549	ng/mL	5.0000
FOSA	Auto	5.218	222149	1744787	18	0.4766	ng/mL	0.5000
N-MeFOSAA	M	4.993	36104	703714	19	0.4894	ng/mL	0.5000
N-MeFOSAA-d3	Auto	4.988	703714	4687359	26	4.9475	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.988	703714	703714	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.610	515232	515232	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.610	515232	4687359	26	5.0381	ng/mL	5.0000
N-MeFOSA	Auto	5.613	63059	515232	1	0.4635	ng/mL	0.5000
N-MeFOSE-d7	Auto	5.581	726818	4687359	26	4.8925	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.581	726818	726818	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.589	101153	726818	20	0.4790	ng/mL	0.5000

Insight Report

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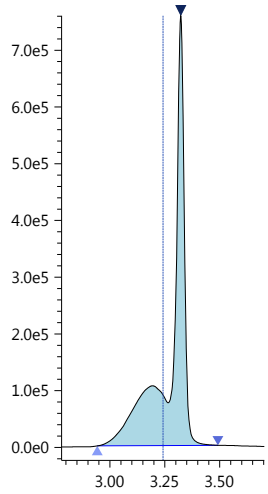
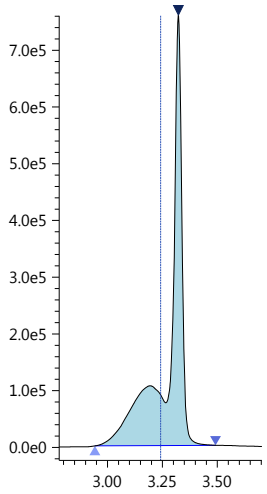
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.090	29905	700438	21	0.4917	ng/mL	0.5000
N-EtFOSAA-d5_IS	Auto	5.086	700438	700438	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.086	700438	4687359	26	5.1294	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.747	827037	827037	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.747	827037	4687359	26	4.8229	ng/mL	5.0000
N-EtFOSA	Auto	5.753	14028	827037	23	0.4786	ng/mL	0.5000
N-EtFOSE-d9_IS	Auto	5.713	796434	796434	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.713	796434	4687359	26	4.9674	ng/mL	5.0000
N-EtFOSE	Auto	5.724	97002	796434	24	0.5008	ng/mL	0.5000
13C7-PFUnDA_IS	Auto	5.067	4687359	4687359	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.195	48574	896026	16	0.5408	ng/mL	0.4705
PFNS	Auto	4.865	35488	642272	13	0.4358	ng/mL	0.4808

PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2944193
ISTD 216.90>172.15 (-) 7.61e5



PFBA-13C
Conc 4.8950
RT 3.323 Area 2944193
Q 216.90>172.15 (-) 7.61e5



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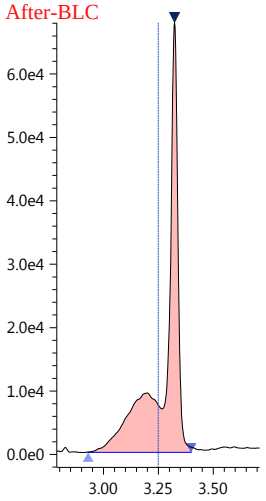
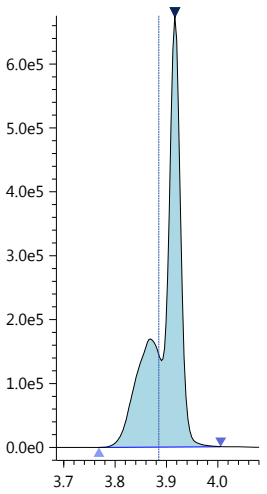
Conc 0.4935
RT 3.324 Area 256266
Q 213.00>169.10 (-) 6.81e4
After-BLC



PFPeA-13C_IS
Conc 5.0000
RT 3.916 Area 1638518
ISTD 267.90>223.00 (-) 6.76e5



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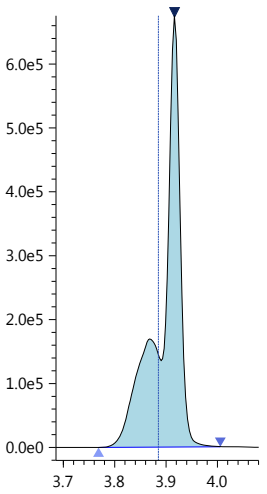
Q 267.90>223.00 (-) 6.76e5



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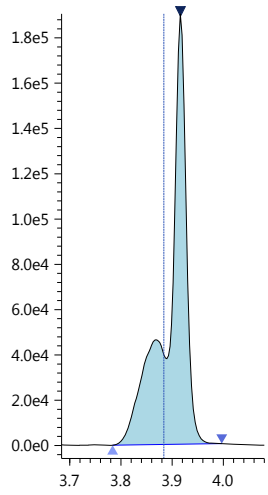
Conc 0.4955
RT 3.916 Area 462520
Q 263.05>219.10 (-) 1.91e5



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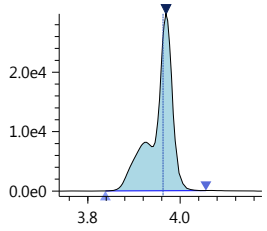
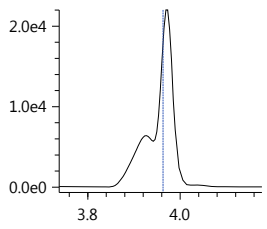
Conc 0.4481
RT 3.970 Area 81796
R#1 73.43 (0.00)
Q 299.00>80.00 (-) 2.98e4



R1 298.80>99.00 (-) 2.20e4



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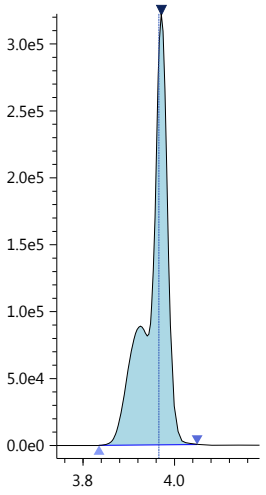
Conc 4.7767
RT 3.971 Area 896026
Q 301.80>80.00 (-) 3.23e5



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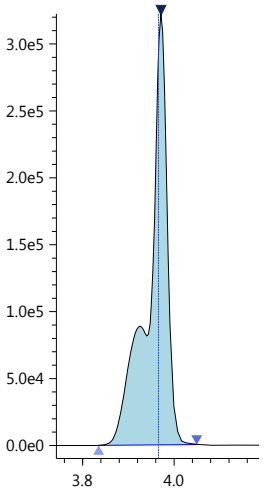
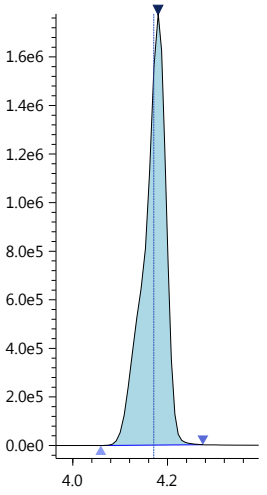
Conc 5.0000
RT 3.971 Area 896026
ISTD 301.80>80.00 (-) 3.23e5



PFHxA-13C_IS
Conc 5.0000
RT 4.180 Area 5558292
ISTD 314.90>270.10 (-) 1.78e6



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PFHxA-13C
Conc 4.9661
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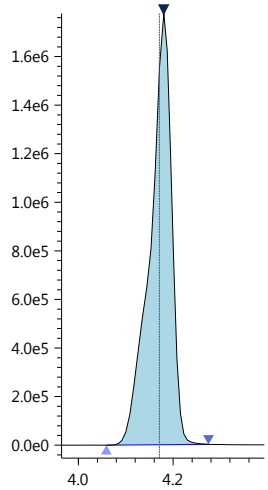
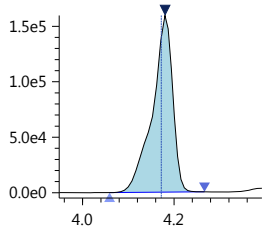
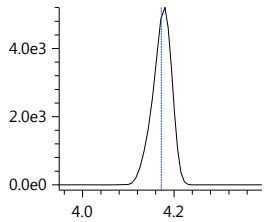
Q 314.90>270.10 (-) 1.78e6



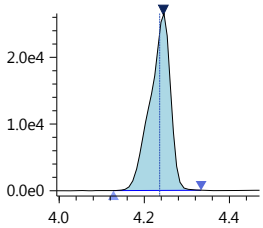
PFHxA
Conc 0.4947
RT 4.180 Area 486757
R#1 3.31 (0.00)
Q 313.00>269.00 (-) 1.60e5



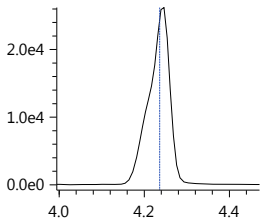
R1 313.00>119.10 (-) 5.20e3



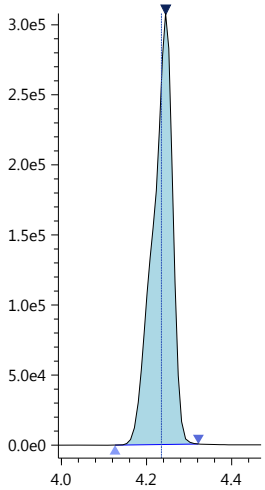
HPFO_DA
Conc 0.4791
RT 4.245 Area 87613
R#1 98.50 (0.00)
Q 329.00>169.00 (-) 2.66e4



R1 329.00>285.10 (-) 2.62e4



HFPO_DA-13C_IS
Conc 5.0000
RT 4.245 Area 986293
ISTD 332.00>286.80 (-) 3.08e5



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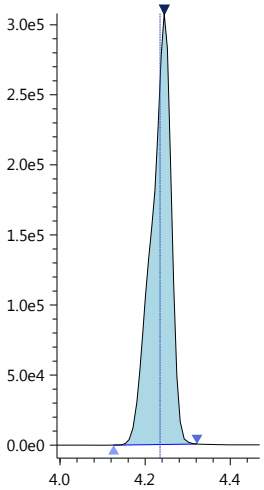
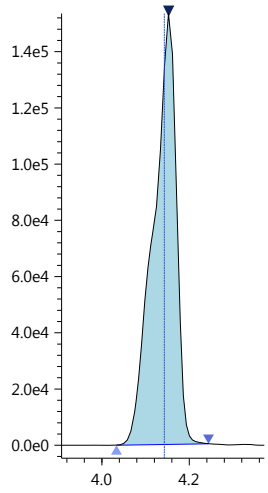
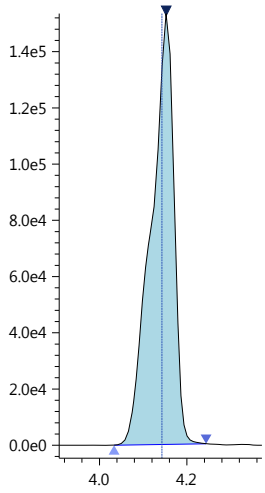
RT 4.245 Area 986293
Q 332.00>286.80 (-) 3.08e5



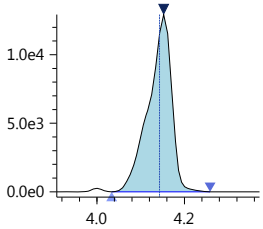
4_2-FTS-13C_IS
Conc 5.0000
RT 4.153 Area 555702
ISTD 328.80>309.05 (-) 1.54e5



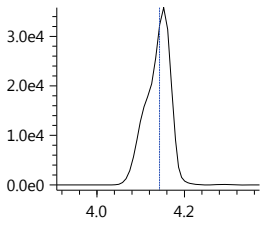
4_2-FTS-13C
Conc 4.8257
RT 4.153 Area 555702
Q 328.80>309.05 (-) 1.54e5



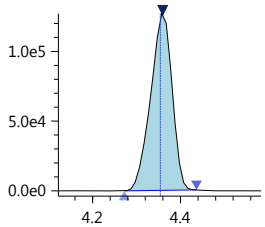
4_2-FTS_1
Conc 0.4867
RT 4.152 Area 46765
R#1 276.56 (0.00)
Q 327.00>307.05 (-) 1.29e4



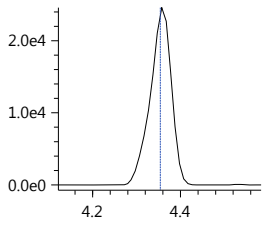
R1 327.00>81.10 (-) 3.58e4



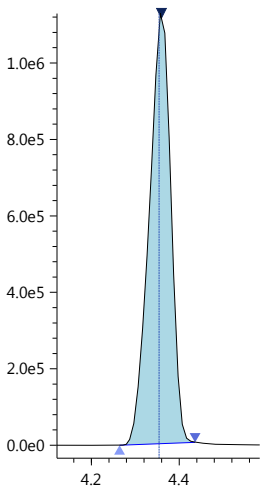
PFHpA
Conc 0.5226
RT 4.360 Area 431361
R#1 19.34 (0.00)
Q 362.90>319.00 (-) 1.27e5



R1 362.90>169.00 (-) 2.46e4



PFHpA-13C_IS
Conc 5.0000
RT 4.360 Area 3860045
ISTD 366.90>322.10 (-) 1.13e6



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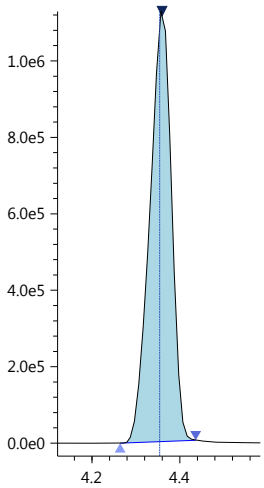
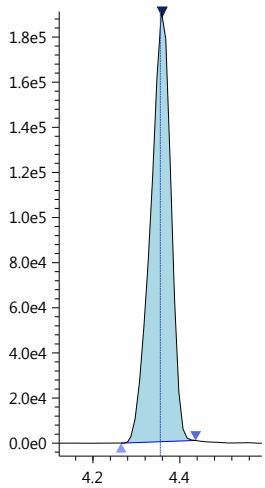
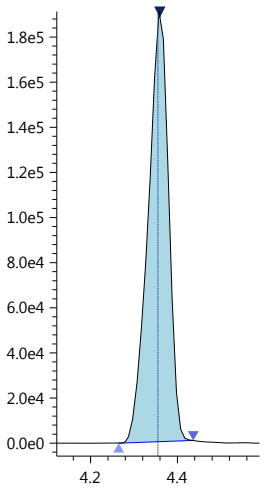
PFHpA-13C
Conc 4.5975
RT 4.360 Area 3860045
Q 366.90>322.10 (-) 1.13e6



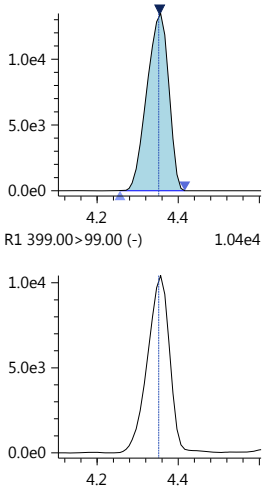
PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 626151
ISTD 402.70>84.05 (-) 1.91e5



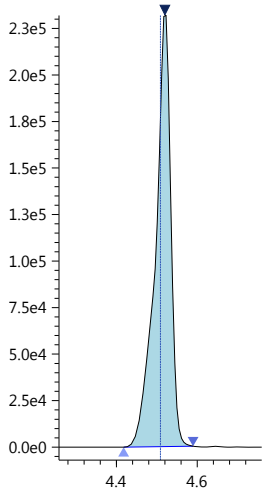
PFHxS-18O
Conc 4.8384
RT 4.360 Area 626151
Q 402.70>84.05 (-) 1.91e5



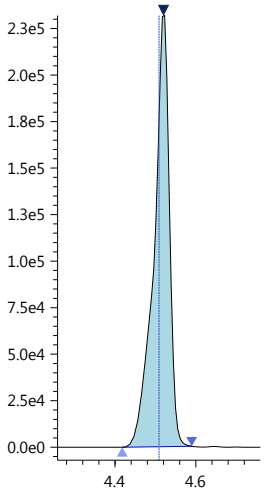
PFHxS_1
Conc 0.4178
RT 4.354 Area 50406
R#1 76.43 (0.00)
Q 399.00>80.00 (-) 1.35e4



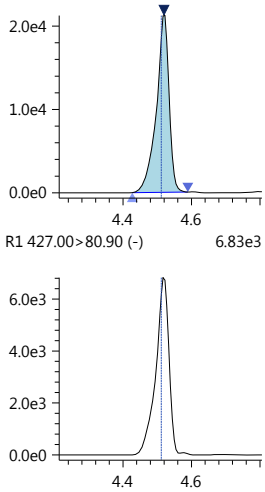
6_2-FTS-13C
Conc 5.2777
RT 4.520 Area 614501
Q 428.90>409.00 (-) 2.32e5



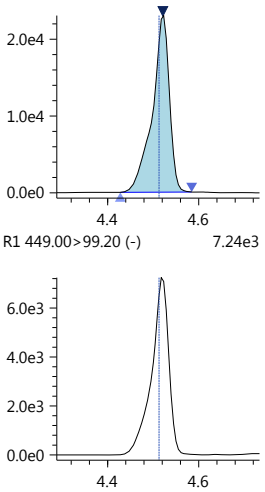
6_2-FTS-13C_IS
Conc 5.0000
RT 4.520 Area 614501
ISTD 428.90>409.00 (-) 2.32e5



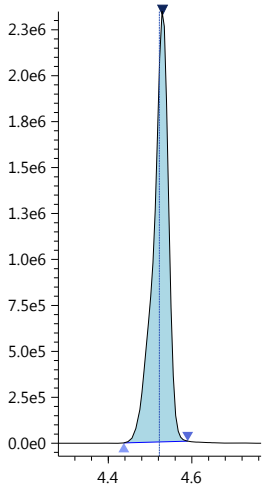
6_2-FTS_1
Conc 0.4838
RT 4.520 Area 54931
R#1 31.95 (0.00)
Q 427.00>407.00 (-) 2.13e4



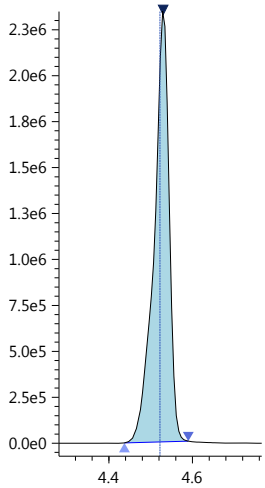
PFHpS_1
Conc 0.4735
RT 4.521 Area 59756
R#1 32.23 (0.00)
Q 449.00>80.15 (-) 2.31e4



PFOA-13C_IS
Conc 5.0000
RT 4.530 Area 5850886
ISTD 416.80>372.05 (-) 2.35e6



PFOA-13C
Conc 5.2279
RT 4.530 Area 5850886
Q 416.80>372.05 (-) 2.35e6



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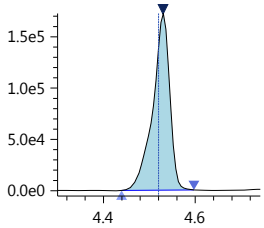
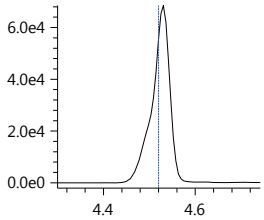
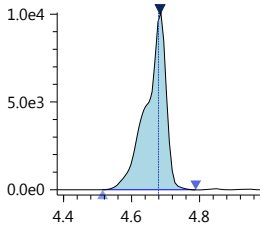
PFOA
Conc 0.4583
RT 4.530 Area 440275
R#1 39.61 (0.00)
Q 413.00>369.00 (-) 1.73e5



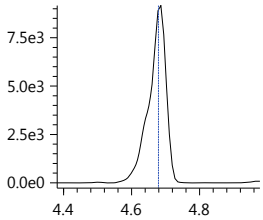
R1 413.00>169.10 (-) 6.85e4



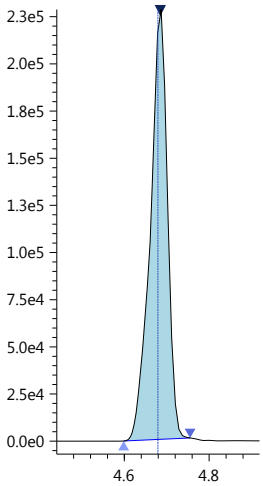
PFOS_1
Conc 0.4313
RT 4.684 Area 40855
R#1 90.48 (0.00)
Q 499.00>80.00 (-) 1.01e4



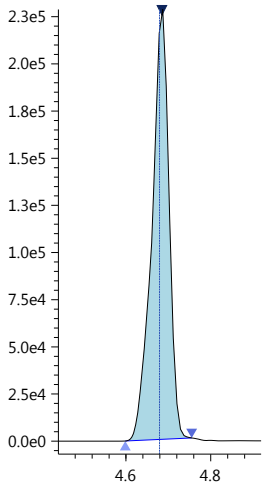
R1 499.00>99.00 (-) 9.16e3



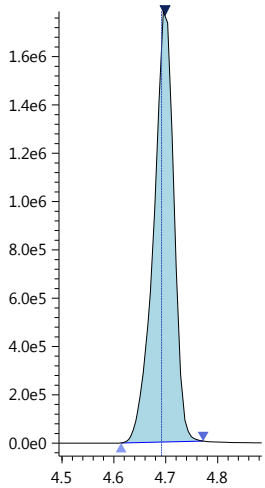
PFOS-13C_IS
Conc 5.0000
RT 4.685 Area 642272
ISTD 502.80>80.05 (-) 2.29e5



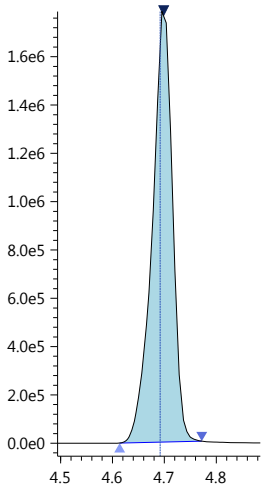
PFOS-13C
Conc 4.7552
RT 4.685 Area 642272
Q 502.80>80.05 (-) 2.29e5



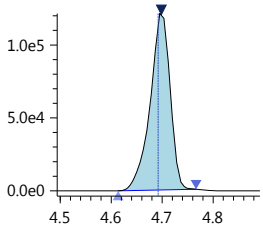
PFNA-13C_IS
Conc 5.0000
RT 4.699 Area 4864669
ISTD 467.80>423.00 (-) 1.79e6



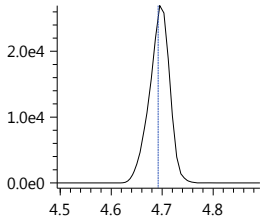
PFNA-13C
Conc 5.2240
RT 4.699 Area 4864669
Q 467.80>423.00 (-) 1.79e6



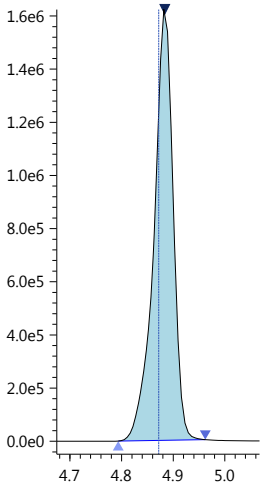
PFNA
Conc 0.5107
RT 4.698 Area 329039
R#1 22.28 (0.00)
Q 463.00>418.90 (-) 1.22e5



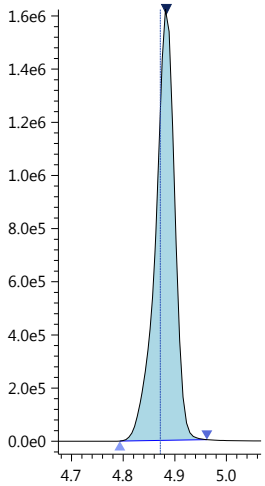
R1 463.00>219.00 (-) 2.69e4



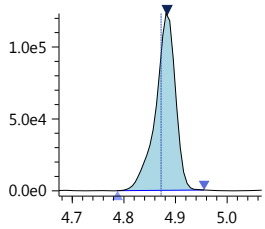
PFDA-13C_IS
Conc 5.0000
RT 4.884 Area 4209248
ISTD 514.80>469.95 (-) 1.62e6



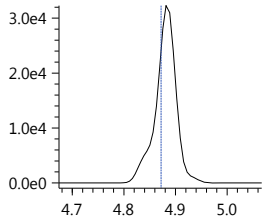
PFDA-13C
Conc 5.1779
RT 4.884 Area 4209248
Q 514.80>469.95 (-) 1.62e6



PFDA
Conc 0.4649
RT 4.884 Area 327613
R#1 26.33 (0.00)
Q 513.00>468.80 (-) 1.23e5



R1 513.00>219.10 (-) 3.23e4



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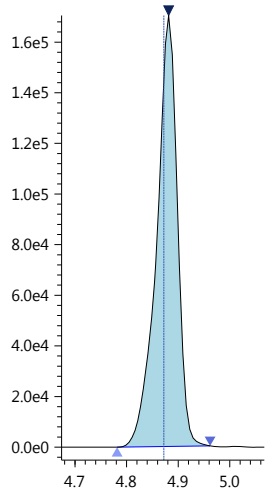
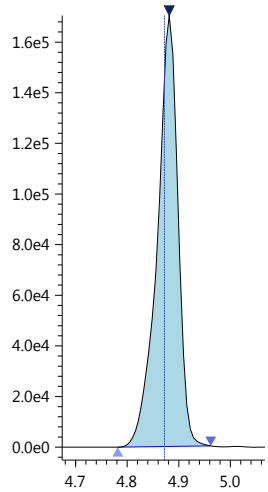
8_2-FTS-13C_IS
Conc 5.0000
RT 4.881 Area 474994

ISTD 528.80>509.00 (-) 1.71e5



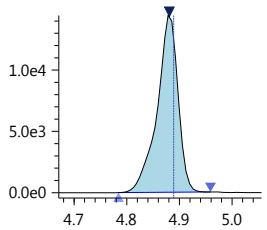
8_2-FTS-13C
Conc 5.2457
RT 4.881 Area 474994

Q 528.80>509.00 (-) 1.71e5

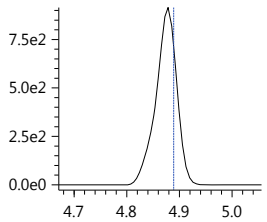


8_2-FTS_1
Conc 0.4749
RT 4.881 Area 39765
R#1 6.30 (0.00)

Q 527.10>506.90 (-) 1.45e4

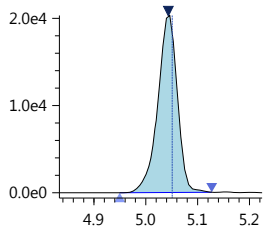


R1 527.20>487.00 (-) 9.15e2

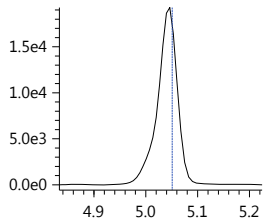


PFDS_1
Conc 0.4528
RT 5.044 Area 53470
R#1 94.90 (0.00)

Q 599.00>79.90 (-) 2.03e4

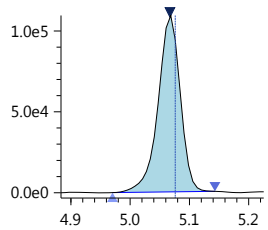


R1 599.00>99.10 (-) 1.93e4

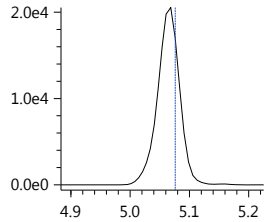


PFUnA
Conc 0.4650
RT 5.067 Area 283410
R#1 18.88 (0.00)

Q 563.00>518.90 (-) 1.10e5

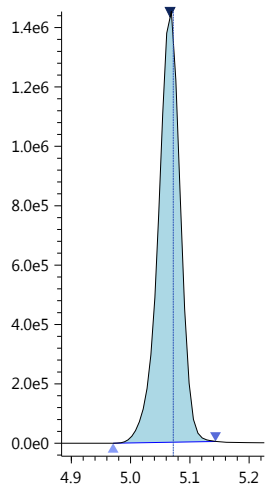


R1 563.00>219.00 (-) 2.05e4



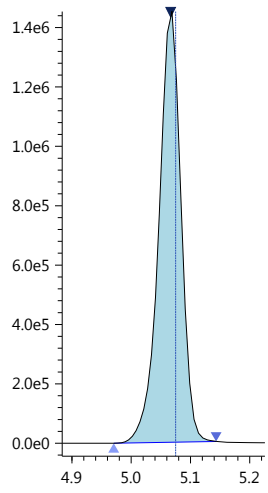
PFUnA-13C_IS
Conc 5.0000
RT 5.067 Area 3769464

ISTD 564.80>519.95 (-) 1.45e6



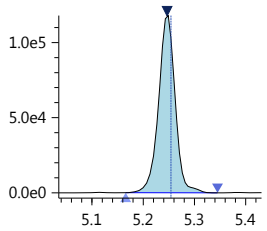
PFUnA-13C
Conc 4.9558
RT 5.067 Area 3769464

Q 564.80>519.95 (-) 1.45e6

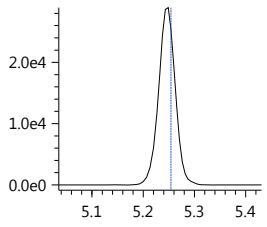


PFDoA
Conc 0.4305
RT 5.247 Area 265923
R#1 24.69 (0.00)

Q 613.05>569.00 (-) 1.18e5

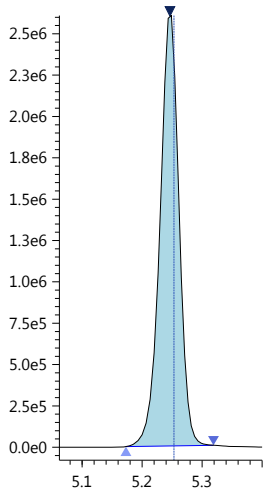


R1 613.05>169.00 (-) 2.89e4



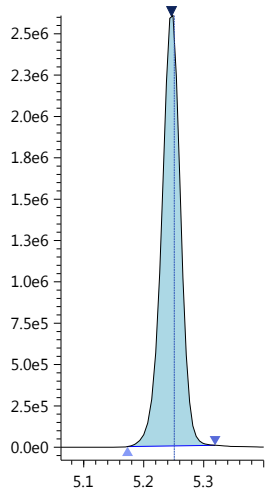
PFDoA-13C
Conc 5.2282
RT 5.246 Area 5770077

Q 614.80>569.95 (-) 2.61e6



PFDoA-13C_IS
Conc 5.0000
RT 5.246 Area 5770077

ISTD 614.80>569.95 (-) 2.61e6



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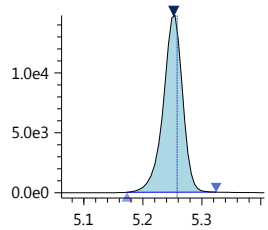
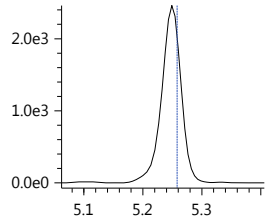
10_2-FtS_1

Conc 0.4964
RT 5.252 Area 33720
R#1 16.95 (0.00)

Q 627.00>606.95 (-) 1.48e4



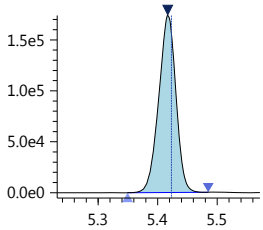
R1 627.00>81.25 (-) 2.46e3



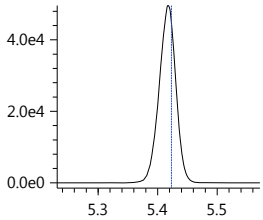
PFTrDA

Conc 0.4841
RT 5.417 Area 350387
R#1 28.47 (0.00)

Q 663.00>618.90 (-) 1.74e5



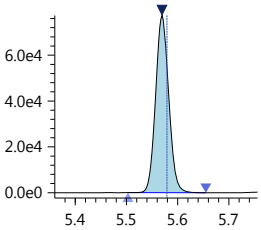
R1 662.90>169.00 (-) 4.96e4



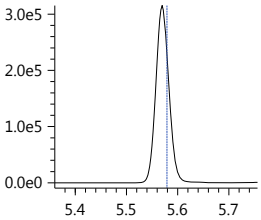
PFTeDA

Conc 0.4463
RT 5.569 Area 137751
R#1 410.36 (0.00)

Q 713.40>669.00 (-) 7.73e4



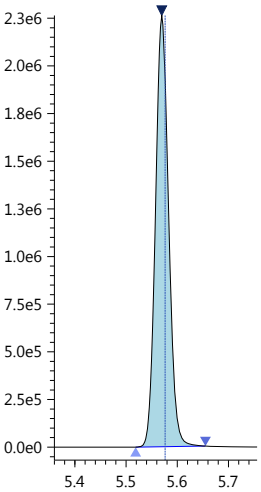
R1 713.40>169.10 (-) 3.15e5



PFTeDA-13C

Conc 5.0912
RT 5.570 Area 4020543

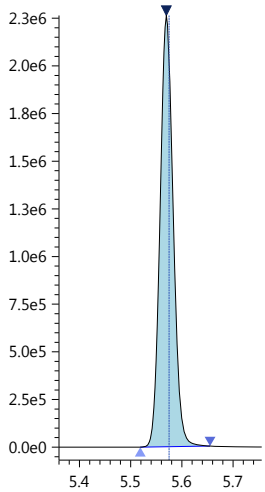
Q 714.70>669.90 (-) 2.26e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.570 Area 4020543

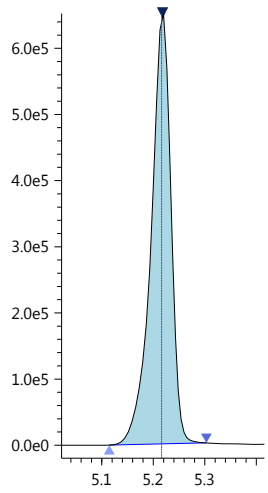
ISTD 714.70>669.90 (-) 2.26e6



FOSA-13C_IS

Conc 5.0000
RT 5.218 Area 1744787

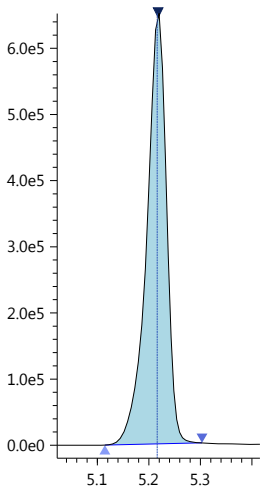
ISTD 506.00>78.05 (-) 6.53e5



FOSA-13C

Conc 4.8549
RT 5.218 Area 1744787

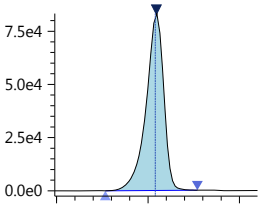
Q 506.00>78.05 (-) 6.53e5



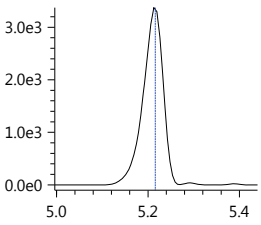
FOSA

Conc 0.4766
RT 5.218 Area 222149
R#1 3.93 (0.00)

Q 498.20>78.00 (-) 8.33e4



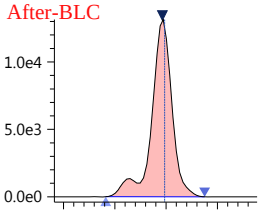
R1 498.20>64.10 (-) 3.37e3



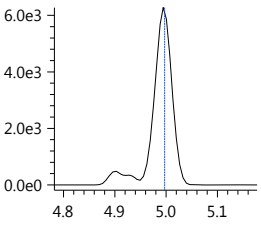
N-MeFOSAA

Conc 0.4894
RT 4.993 Area 36104
R#1 48.09 (0.00)

Q 570.20>419.00 (-) 1.31e4



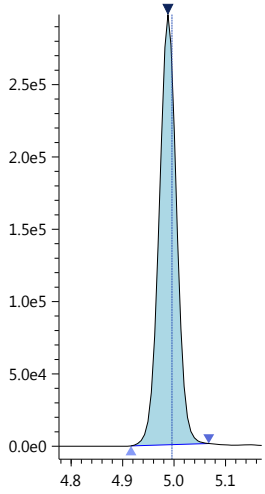
R1 570.20>512.00 (-) 6.27e3



N-MeFOSAA-d3

Conc 4.9475
RT 4.988 Area 703714

Q 572.80>419.05 (-) 2.98e5



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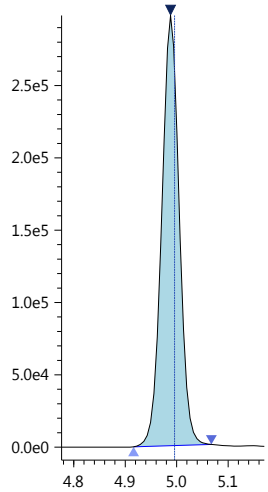
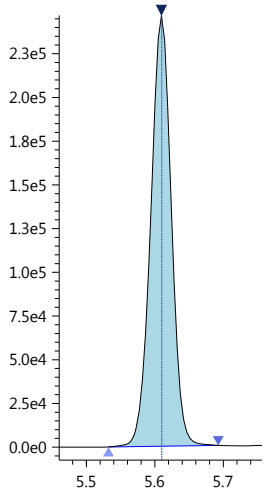
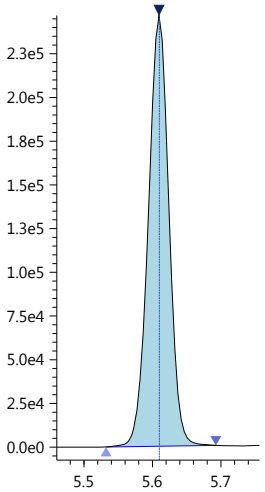
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.988 Area 703714
ISTD 572.80>419.05 (-) 2.98e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.610 Area 515232
ISTD 514.90>168.90 (-) 2.47e5



N-MeFOSA-d3
Conc 5.0381
RT 5.610 Area 515232
Q 514.90>168.90 (-) 2.47e5



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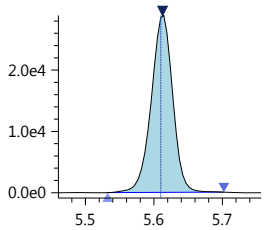
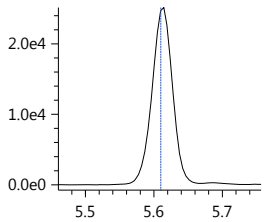
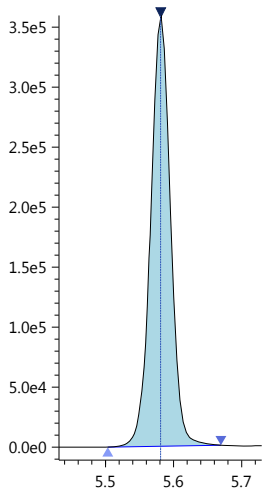
Conc 0.4635
RT 5.613 Area 63059
R#1 87.46 (0.00)
Q 512.00>169.10 (-) 2.89e4



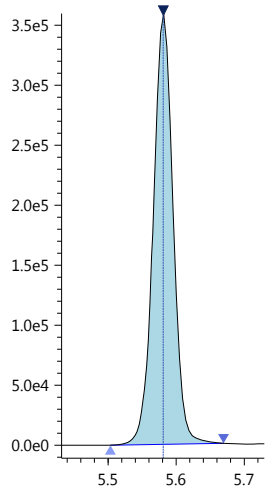
R1 512.00>219.00 (-) 2.52e4



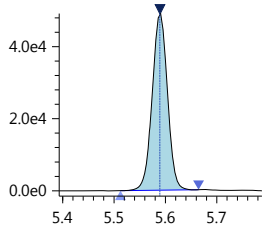
N-MeFOSE-d7
Conc 4.8925
RT 5.581 Area 726818
Q 622.70>59.10 (-) 3.60e5



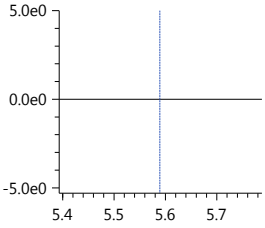
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.581 Area 726818
ISTD 622.70>59.10 (-) 3.60e5



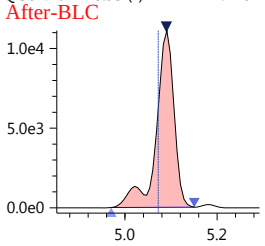
N-MeFOSE
Conc 0.4790
RT 5.589 Area 101153
R#1 0.00 (0.00)
Q 616.00>59.00 (-) 4.92e4



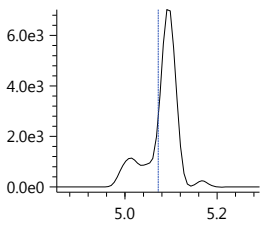
R1 556.00>121.20 (-) 0.00e0



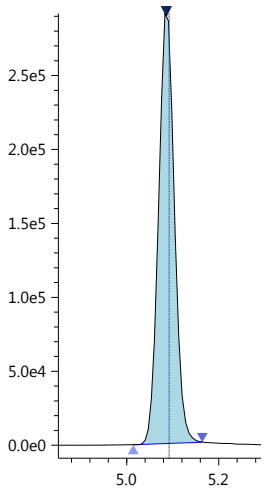
N-EtFOSAA
Conc 0.4917
RT 5.090 Area 29905
R#1 62.60 (0.00)
Q 584.20>418.95 (-) 1.11e4
After-BLC



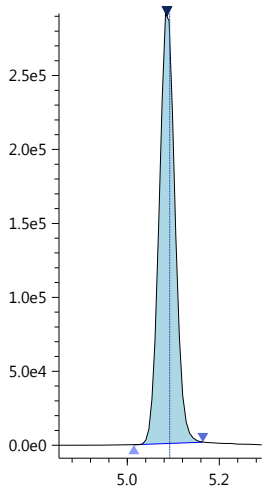
R1 584.20>526.10 (-) 7.02e3



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.086 Area 700438
ISTD 588.80>419.00 (-) 2.92e5



N-EtFOSAA-d5
Conc 5.1294
RT 5.086 Area 700438
Q 588.80>419.00 (-) 2.92e5



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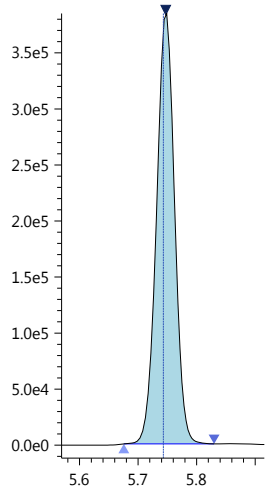
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.747 Area 827037

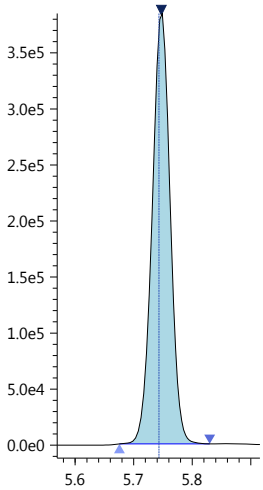
ISTD 530.90>169.15 (-) 3.85e5



N-EtFOSA-d9

Conc 4.8229
RT 5.747 Area 827037

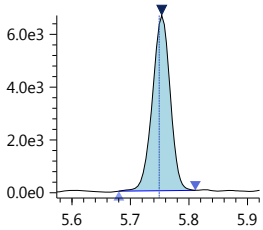
Q 530.90>169.15 (-) 3.85e5



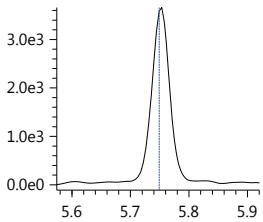
N-EtFOSA

Conc 0.4786
RT 5.753 Area 14028
R#1 54.45 (0.00)

Q 526.90>169.10 (-) 6.72e3



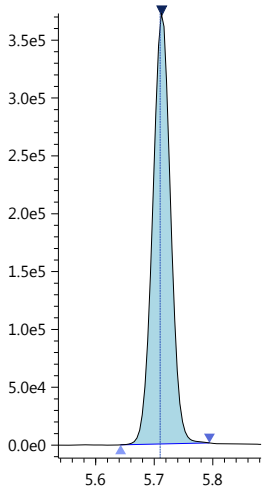
R1 526.90>219.00 (-) 3.66e3



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.713 Area 796434

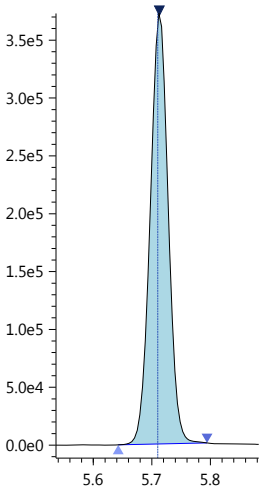
ISTD 638.70>59.10 (-) 3.73e5



N-EtFOSE-d9

Conc 4.9674
RT 5.713 Area 796434

Q 638.70>59.10 (-) 3.73e5



N-EtFOSE

Conc 0.5008
RT 5.724 Area 97002
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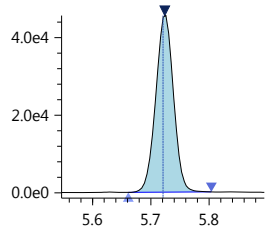
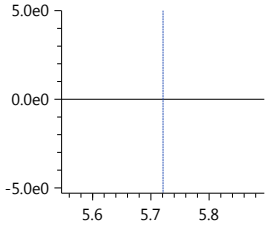
Q 630.00>58.90 (-) 4.57e4



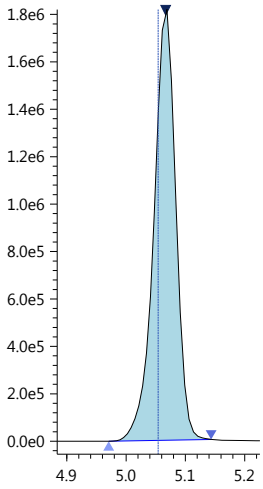
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.067 Area 4687359

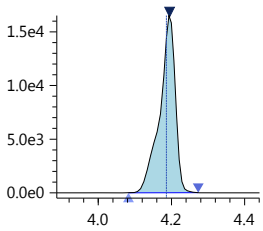
ISTD 570.00>525.00 (-) 1.82e6



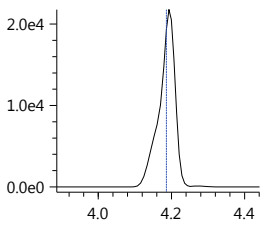
PFPeS

Conc 0.5408
RT 4.195 Area 48574
R#1 131.78 (0.00)

Q 349.00>99.00 (-) 1.65e4



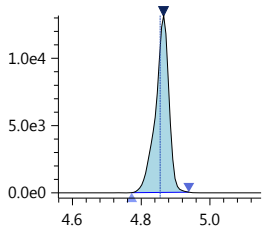
R1 349.00>79.95 (-) 2.18e4



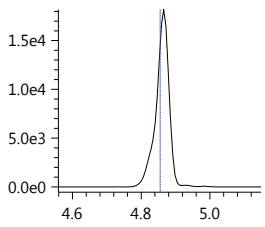
PFNS

Conc 0.4358
RT 4.865 Area 35488
R#1 137.41 (0.00)

Q 549.00>99.00 (-) 1.32e4



R1 549.00>79.95 (-) 1.82e4



Insight Report

Printed at 1/7/2019 10:13:37 AM

010419_018

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Acquired by: System Administrator
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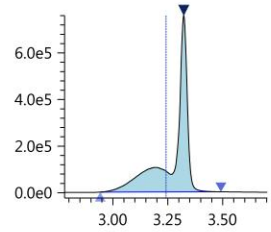
PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2944193
ISTD 216.90>172.15 (-) 7.61e5



PFBA-13C
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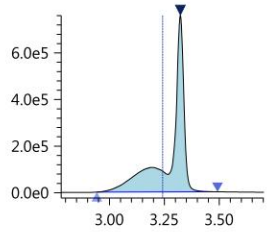
Q 216.90>172.15 (-) 7.61e5



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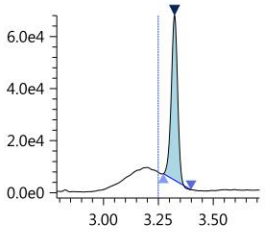
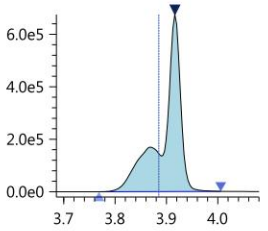
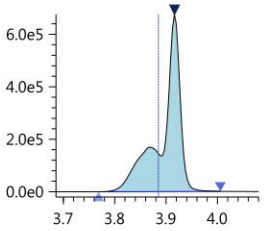
Conc 0.5000
RT 3.324 Area 126626
Q 213.00>169.10 (-) 6.81e4



PFPeA-13C_IS
Conc 5.0000
RT 3.916 Area 1638518
ISTD 267.90>223.00 (-) 6.76e5



PFPeA-13C
Conc 5.0465
RT 3.916 Area 1638518
Q 267.90>223.00 (-) 6.76e5



PFPeA
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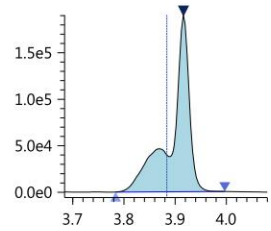
RT 3.916 Area 462520
Q 263.05>219.10 (-) 1.91e5



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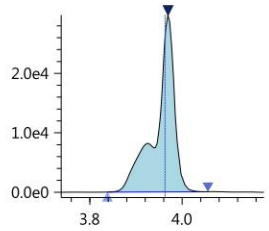
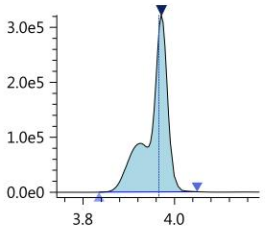
Conc 0.4630
RT 3.970 Area 81796
Q 299.00>80.00 (-) 2.98e4



PFBS-13C
Conc 4.9693
RT 3.971 Area 896026
Q 301.80>80.00 (-) 3.23e5



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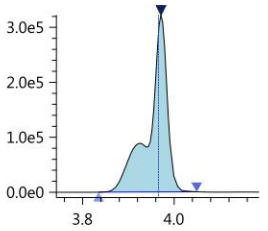
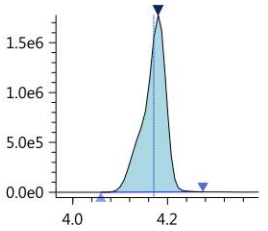
ISTD 301.80>80.00 (-) 3.23e5



PFHxA-13C_IS
Conc 5.0000
RT 4.180 Area 5558292
ISTD 314.90>270.10 (-) 1.78e6



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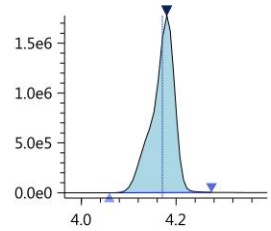
Conc 5.0679
RT 4.180 Area 5558292
Q 314.90>270.10 (-) 1.78e6



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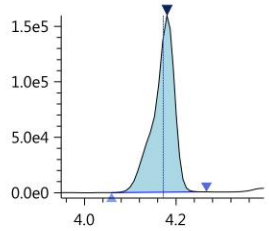
Conc 0.4899
RT 4.180 Area 486757
Q 313.00>269.00 (-) 1.60e5



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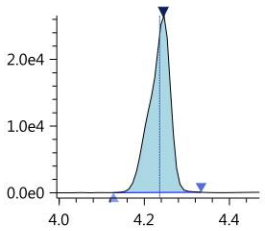
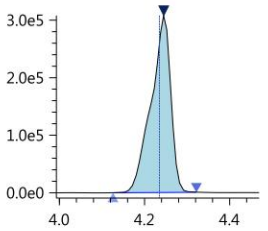
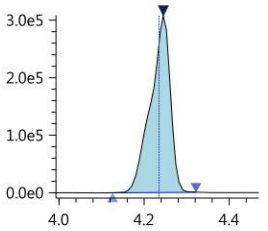
RT 4.245 Area 87613
Q 329.00>169.00 (-) 2.66e4



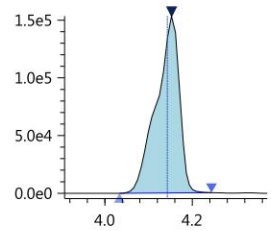
HFPO_DA-13C_IS
Conc 5.0000
RT 4.245 Area 986293
ISTD 332.00>286.80 (-) 3.08e5



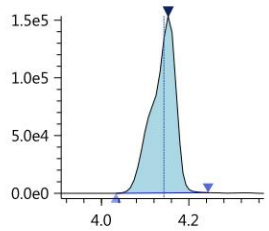
HFPO_DA-13C
Conc 5.0761
RT 4.245 Area 986293
Q 332.00>286.80 (-) 3.08e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.153 Area 555702
ISTD 328.80>309.05 (-) 1.54e5



4_2-FTS-13C
Conc 5.0192
RT 4.153 Area 555702
Q 328.80>309.05 (-) 1.54e5



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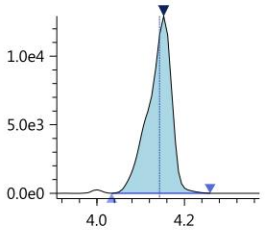
Conc 0.5192
RT 4.152 Area 46765
Q 327.00>307.05 (-) 1.29e4



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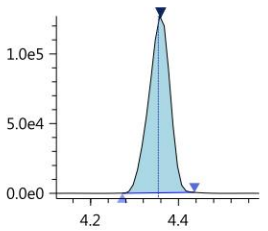
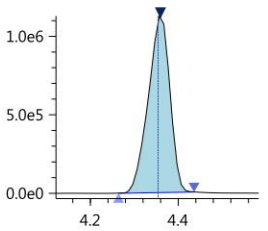
Q 362.90>319.00 (-) 1.27e5



PFHpA-13C_IS
Conc 5.0000
RT 4.360 Area 3860045
ISTD 366.90>322.10 (-) 1.13e6



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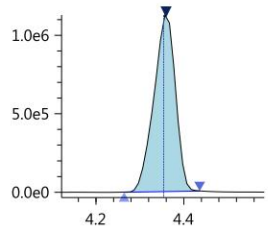
PFHpA-13C
Conc 4.7182
RT 4.360 Area 3860045
Q 366.90>322.10 (-) 1.13e6



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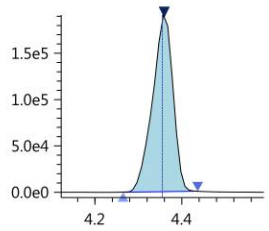
ISTD 402.70>84.05 (-) 1.91e5



PFHxS-18O
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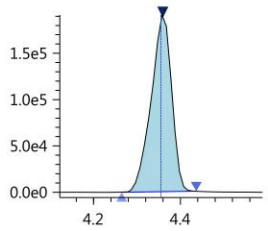
RT 4.360 Area 626151
Q 402.70>84.05 (-) 1.91e5



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Conc 0.4286
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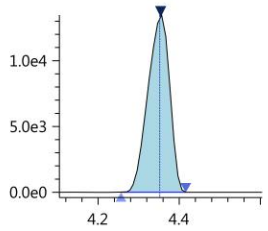

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Conc 5.0177
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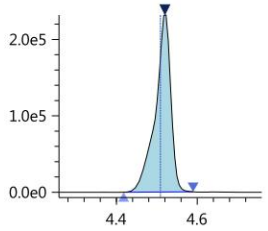
Q 428.90>409.00 (-) 2.32e5



6_2-FTS-13C_IS
Conc 5.0000
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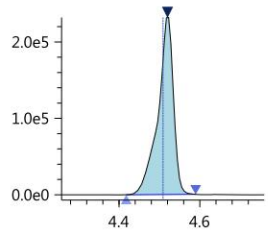
ISTD 428.90>409.00 (-) 2.32e5



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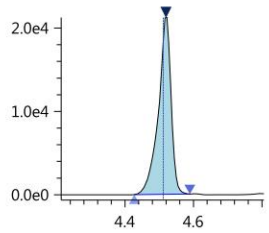
RT 4.520 Area 54931
Q 427.00>407.00 (-) 2.13e4



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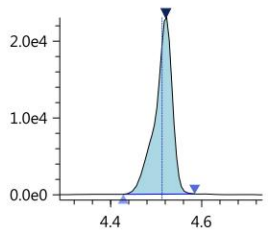
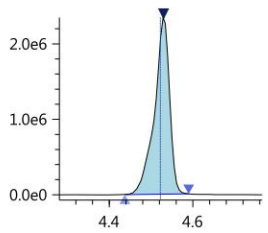
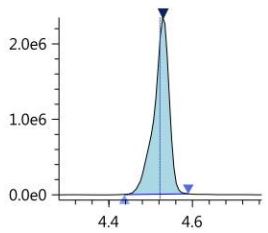
Conc 0.5016
RT 4.521 Area 59756
Q 449.00>80.15 (-) 2.31e4



PFOA-13C_IS
Conc 5.0000
RT 4.530 Area 5850886
ISTD 416.80>372.05 (-) 2.35e6



PFOA-13C
Conc 5.1236
RT 4.530 Area 5850886
Q 416.80>372.05 (-) 2.35e6



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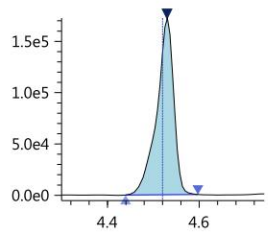
RT 4.530 Area 440275
Q 413.00>369.00 (-) 1.73e5



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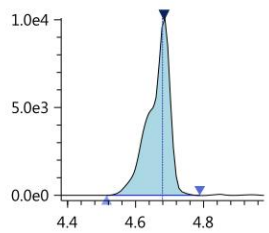
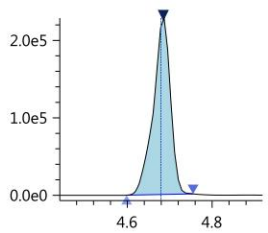
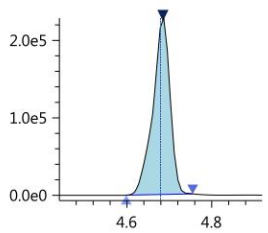
Conc 0.4420
RT 4.684 Area 40855
Q 499.00>80.00 (-) 1.01e4



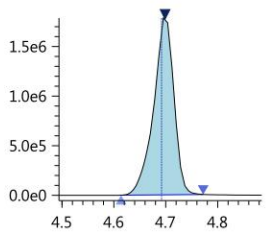
PFOS-13C_IS
Conc 5.0000
RT 4.685 Area 642272
ISTD 502.80>80.05 (-) 2.29e5



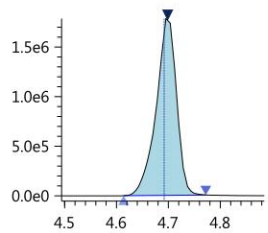
PFOS-13C
Conc 5.0174
RT 4.685 Area 642272
Q 502.80>80.05 (-) 2.29e5



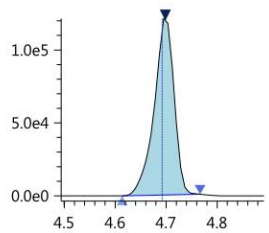
PFNA-13C_IS
Conc 5.0000
RT 4.699 Area 4864669
ISTD 467.80>423.00 (-) 1.79e6



PFNA-13C
Conc 5.1116
RT 4.699 Area 4864669
Q 467.80>423.00 (-) 1.79e6



PFNA
Conc 0.5241
RT 4.698 Area 329039
Q 463.00>418.90 (-) 1.22e5



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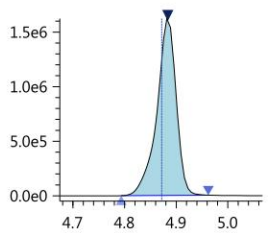
Conc 5.0000
RT 4.884 Area 4209248
ISTD 514.80>469.95 (-) 1.62e6



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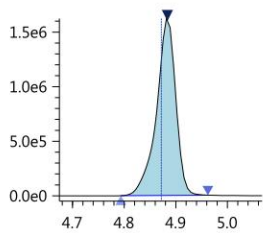
RT 4.884 Area 4209248
Q 514.80>469.95 (-) 1.62e6



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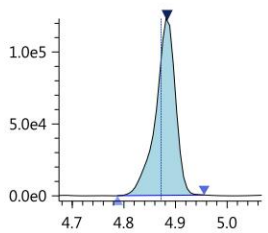
Conc 0.4610
RT 4.884 Area 327613
Q 513.00>468.80 (-) 1.23e5



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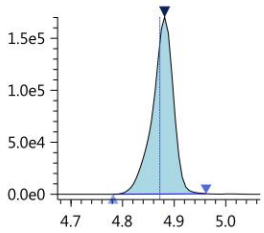
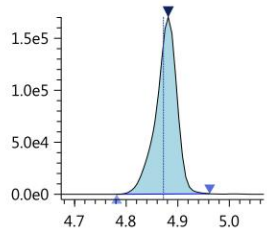
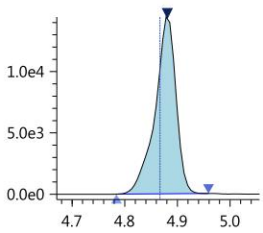
8_2-FTS-13C_IS
Conc 5.0000
RT 4.881 Area 474994
ISTD 528.80>509.00 (-) 1.71e5



8_2-FTS-13C
Conc 5.0069
RT 4.881 Area 474994
Q 528.80>509.00 (-) 1.71e5



8_2-FTS_1
Conc 0.4830
RT 4.881 Area 39765
Q 527.10>506.90 (-) 1.45e4



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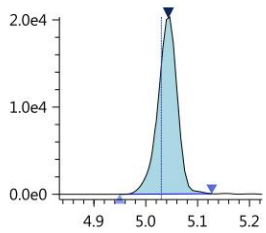
Conc 0.4123
RT 5.044 Area 53470
Q 599.00>79.90 (-) 2.03e4



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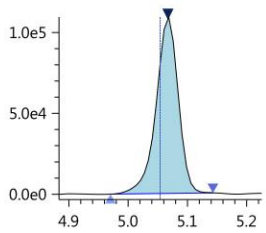
Conc 0.4558
RT 5.067 Area 283410
Q 563.00>518.90 (-) 1.10e5



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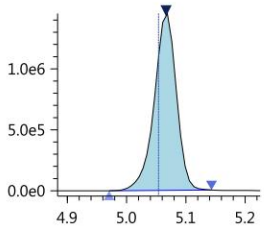
RT 5.067 Area 3769464
ISTD 564.80>519.95 (-) 1.45e6



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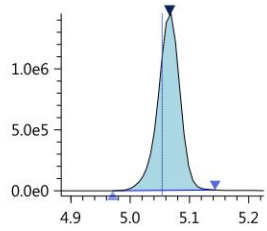
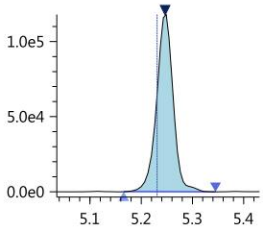
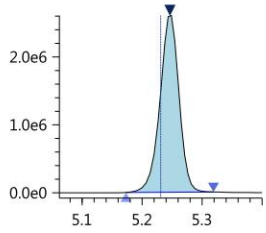
RT 5.067 Area 3769464
Q 564.80>519.95 (-) 1.45e6



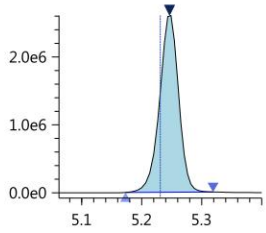
PFDoA
Conc 0.4591
RT 5.247 Area 265923
Q 613.05>569.00 (-) 1.18e5



PFDoA-13C
Conc 5.1753
RT 5.246 Area 5770077
Q 614.80>569.95 (-) 2.61e6



PFDoA-13C_IS
Conc 5.0000
RT 5.246 Area 5770077
ISTD 614.80>569.95 (-) 2.61e6



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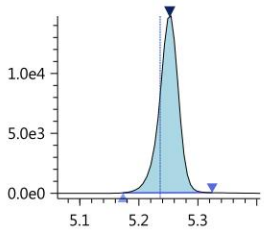
Conc 0.5183
RT 5.252 Area 33720
Q 627.00>606.95 (-) 1.48e4



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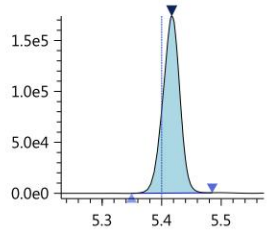
Conc 0.4733
RT 5.417 Area 350387
Q 663.00>618.90 (-) 1.74e5



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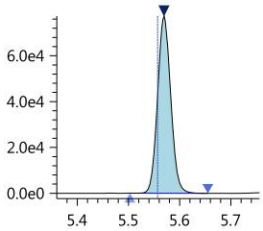
Conc 0.2562
RT 5.569 Area 137751
Q 713.40>669.00 (-) 7.73e4



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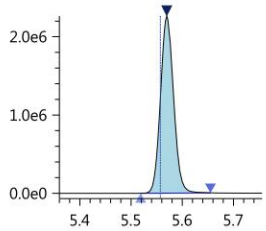
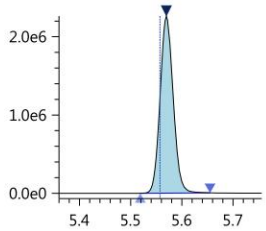
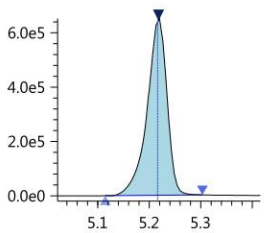
Conc 5.0746
RT 5.570 Area 4020543
Q 714.70>669.90 (-) 2.26e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.570 Area 4020543
ISTD 714.70>669.90 (-) 2.26e6



FOSA-13C_IS
Conc 5.0000
RT 5.218 Area 1744787
ISTD 506.00>78.05 (-) 6.53e5



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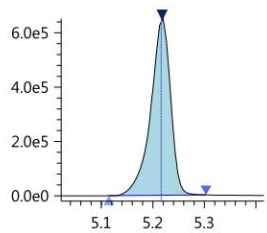
Conc 4.9948
RT 5.218 Area 1744787
Q 506.00>78.05 (-) 6.53e5



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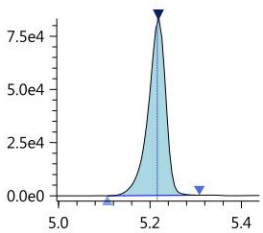
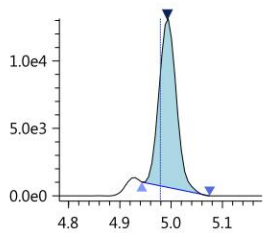
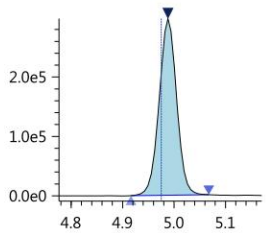
Conc 0.4881
RT 5.218 Area 222149
Q 498.20>78.00 (-) 8.33e4



N-MeFOSAA
Conc 0.4997
RT 4.993 Area 29469
Q 570.20>419.00 (-) 1.31e4



N-MeFOSAA-d3
Conc 5.1778
RT 4.988 Area 703714
Q 572.80>419.05 (-) 2.98e5



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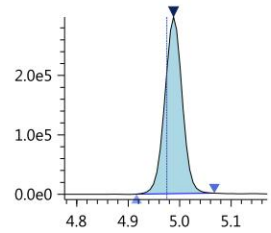
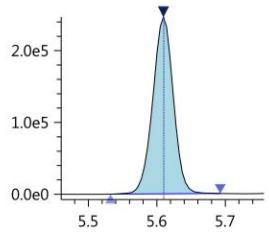
Printed at 1/7/2019 10:13:37 AM

N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.988 Area 703714
ISTD 572.80>419.05 (-) 2.98e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.610 Area 515232
ISTD 514.90>168.90 (-) 2.47e5



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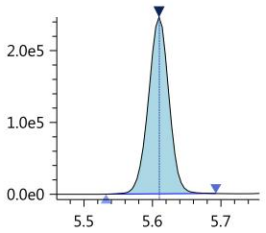
Q 514.90>168.90 (-) 2.47e5



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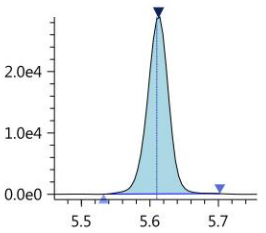
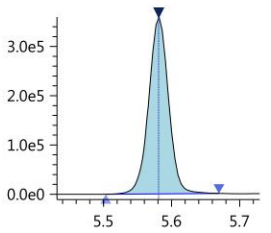
Conc 0.4646
RT 5.613 Area 63059
Q 512.00>169.10 (-) 2.89e4



N-MeFOSE-d7
Conc 5.0592
RT 5.581 Area 726818
Q 622.70>59.10 (-) 3.60e5



N-MeFOSE-d7_IS
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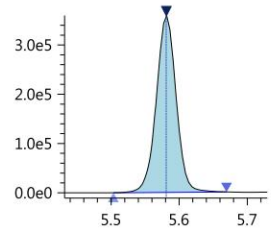
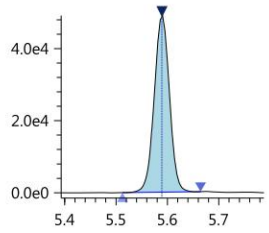
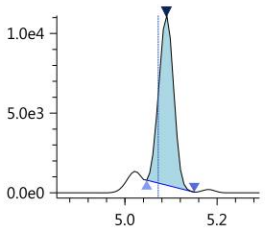
RT 5.581 Area 726818
ISTD 622.70>59.10 (-) 3.60e5



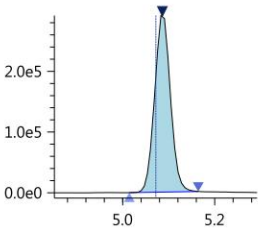
N-MeFOSE
Conc 0.4825
RT 5.589 Area 101153
Q 616.00>59.00 (-) 4.92e4



N-EtFOSAA
Conc 0.6275
RT 5.090 Area 24261
Q 584.20>418.95 (-) 1.11e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.086 Area 700438
ISTD 588.80>419.00 (-) 2.92e5



N-EtFOSAA-d5
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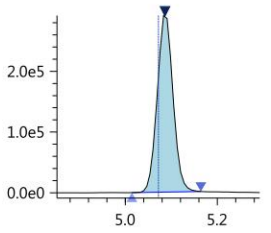
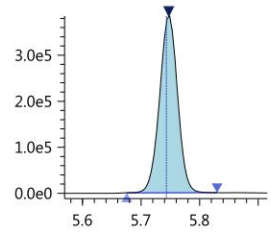


N-EtFOSA-d9_IS
Conc 5.0000
RT 5.747 Area 827037
ISTD 530.90>169.15 (-) 3.85e5



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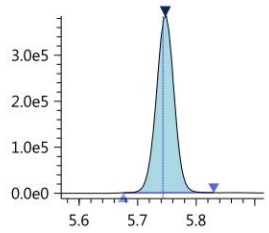
Q 530.90>169.15 (-) 3.85e5



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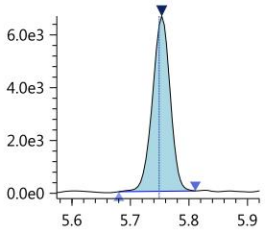
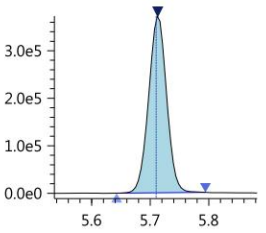
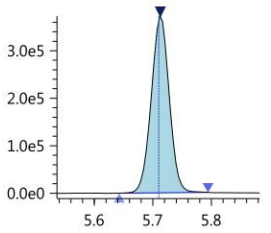
Conc 0.4979
RT 5.753 Area 14028
Q 526.90>169.10 (-) 6.72e3



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.713 Area 796434
ISTD 638.70>59.10 (-) 3.73e5



N-EtFOSE-d9
Conc 5.2097
RT 5.713 Area 796434
Q 638.70>59.10 (-) 3.73e5



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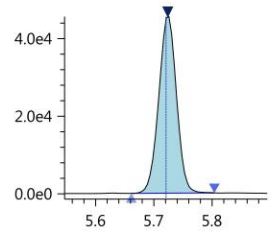
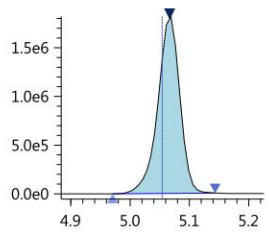
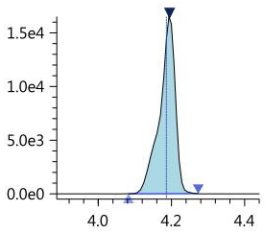
Conc 0.5042
RT 5.724 Area 97002
Q 630.00>58.90 (-) 4.57e4



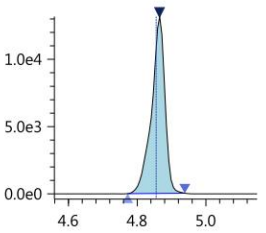
13C7-PFUnDA_IS
Conc 5.0000
RT 5.067 Area 4687359
ISTD 570.00>525.00 (-) 1.82e6



PFPeS
Conc 0.6013
RT 4.195 Area 48574
Q 349.00>99.00 (-) 1.65e4



PFNS
Conc 0.5291
RT 4.865 Area 35488
Q 549.00>99.00 (-) 1.32e4



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_019

Sample ID: 1.0 PPB ICAL
Date acquired: 1/4/2019 5:37:32 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_019.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.331	2927394	2927394	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.331	2927394	4839471	26	4.7141	ng/mL	5.0000
PFBA	M	3.332	505147	2927394	2	0.9783	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.924	1647481	1647481	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.924	1647481	4839471	26	4.7608	ng/mL	5.0000
PFPeA	Auto	3.924	836381	1647481	4	0.9572	ng/mL	1.0000
PFBS_1	Auto	3.978	166197	915357	16	0.8913	ng/mL	0.8874
PFBS-13C	Auto	3.980	915357	4839471	26	4.7264	ng/mL	5.0000
PFBS-13C_IS	Auto	3.980	915357	915357	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.188	5795460	5795460	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.188	5795460	4839471	26	5.0153	ng/mL	5.0000
PFHxA	Auto	4.188	991270	5795460	6	0.9682	ng/mL	1.0000
HPFO_DA	Auto	4.253	175247	996773	3	0.9483	ng/mL	1.0000
HFPO_DA-13C_IS	Auto	4.253	996773	996773	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.253	996773	4839471	26	4.8424	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.160	573883	573883	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.160	573883	4839471	26	4.8270	ng/mL	5.0000
4_2-FTS_1	Auto	4.160	95565	573883	5	0.9630	ng/mL	0.9372
PFHpA	Auto	4.369	910975	4524970	8	0.9421	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.369	4524970	4524970	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.369	4524970	4839471	26	5.2200	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.368	657938	657938	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.368	657938	4839471	26	4.9242	ng/mL	5.0000
PFHxS_1	Auto	4.367	106917	657938	7	0.8434	ng/mL	0.9131
6_2-FTS-13C	Auto	4.526	584540	4839471	26	4.8626	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.526	584540	584540	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.526	108509	584540	10	1.0046	ng/mL	0.9512
PFHpS_1	Auto	4.528	119046	657938	7	0.8977	ng/mL	0.9534
PFOA-13C_IS	Auto	4.536	5688486	5688486	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.536	5688486	4839471	26	4.9231	ng/mL	5.0000
PFOA	Auto	4.537	908283	5688486	9	0.9733	ng/mL	1.0000
PFOS_1	Auto	4.691	83990	670966	13	0.8488	ng/mL	0.9292
PFOS-13C_IS	Auto	4.691	670966	670966	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.691	670966	4839471	26	4.8115	ng/mL	5.0000
PFNA-13C_IS	Auto	4.706	4794824	4794824	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.706	4794824	4839471	26	4.9872	ng/mL	5.0000
PFNA	Auto	4.705	615843	4794824	11	0.9671	ng/mL	1.0000
PFDA-13C_IS	Auto	4.890	4138515	4138515	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.890	4138515	4839471	26	4.9309	ng/mL	5.0000
PFDA	Auto	4.891	673981	4138515	12	0.9727	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.888	441391	441391	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.888	441391	4839471	26	4.7214	ng/mL	5.0000
8_2-FTS_1	Auto	4.887	79882	441391	15	1.0266	ng/mL	0.9600
PFDS_1	Auto	5.050	111033	670966	13	0.9000	ng/mL	0.9647
PFUnA	Auto	5.073	602048	3876979	14	0.9607	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.073	3876979	3876979	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.073	3876979	4839471	26	4.9369	ng/mL	5.0000
PFDoA	Auto	5.252	579994	5676120	17	0.9427	ng/mL	1.0000
PFDoA-13C	Auto	5.252	5676120	4839471	26	4.9814	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.252	5676120	5676120	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.258	64668	441391	15	1.0245	ng/mL	0.9662
PFTrDA	Auto	5.424	678409	3873033	22	0.9751	ng/mL	1.0000
PFTeDA	Auto	5.577	268486	3873033	22	1.0167	ng/mL	1.0000
PFTeDA-13C	Auto	5.576	3873033	4839471	26	4.7502	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.576	3873033	3873033	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.224	1764198	1764198	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.224	1764198	4839471	26	4.7546	ng/mL	5.0000
FOSA	Auto	5.225	482006	1764198	18	1.0226	ng/mL	1.0000
N-MeFOSAA	M	4.996	68129	684882	19	0.9489	ng/mL	1.0000
N-MeFOSAA-d3	Auto	4.995	684882	4839471	26	4.6638	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.995	684882	684882	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.616	504583	504583	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.616	504583	4839471	26	4.7789	ng/mL	5.0000
N-MeFOSA	Auto	5.619	126728	504583	1	0.9511	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.587	759369	4839471	26	4.9509	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.587	759369	759369	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.595	211410	759369	20	0.9582	ng/mL	1.0000

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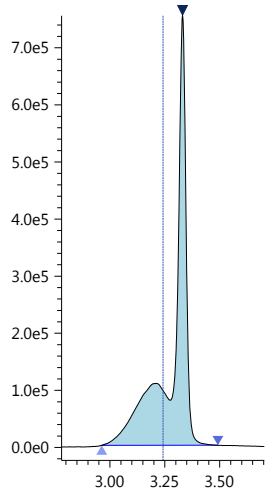
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.098	66792	679001	21	1.0952	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.092	679001	679001	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.092	679001	4839471	26	4.8161	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.754	831309	831309	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.754	831309	4839471	26	4.6955	ng/mL	5.0000
N-EtFOSA	Auto	5.760	27790	831309	23	0.9431	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.719	790345	790345	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.719	790345	4839471	26	4.7745	ng/mL	5.0000
N-EtFOSE	Auto	5.730	190931	790345	24	0.9932	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.072	4839471	4839471	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.203	89192	915357	16	0.9720	ng/mL	0.9409
PFNS	Auto	4.872	81629	670966	13	0.9595	ng/mL	0.9616

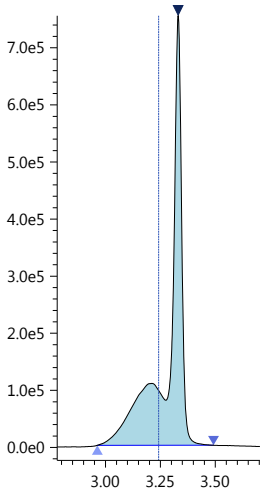
PFBA-13C_IS

Conc 5.0000
RT 3.331 Area 2927394
ISTD 216.90>172.15 (-) 7.56e5



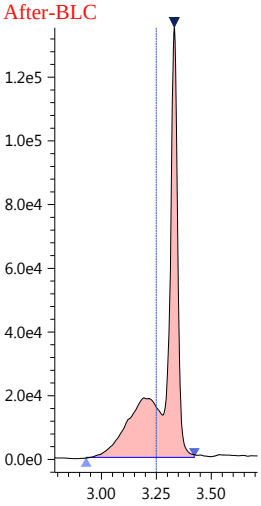
PFBA-13C

Conc 4.7141
RT 3.331 Area 2927394
Q 216.90>172.15 (-) 7.56e5



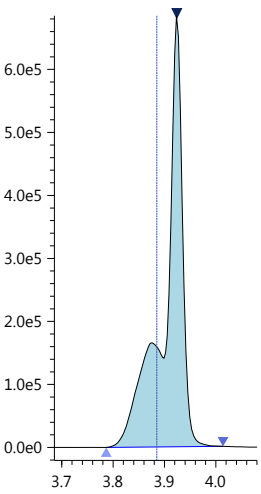
PFBA

Conc 0.9783
RT 3.332 Area 505147
Q 213.00>169.10 (-) 1.36e5
After-BLC



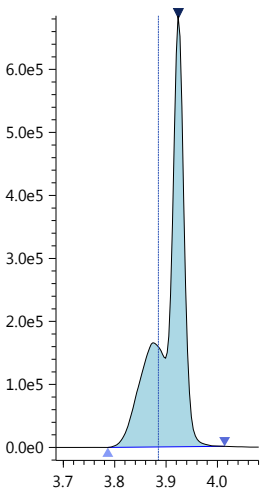
PFPeA-13C_IS

Conc 5.0000
RT 3.924 Area 1647481
ISTD 267.90>223.00 (-) 6.85e5



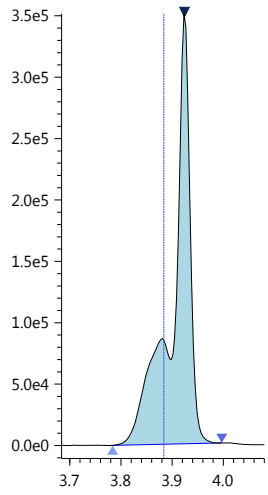
PFPeA-13C

Conc 4.7608
RT 3.924 Area 1647481
Q 267.90>223.00 (-) 6.85e5



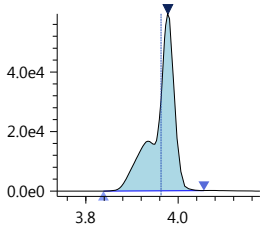
PFPeA

Conc 0.9572
RT 3.924 Area 836381
Q 263.05>219.10 (-) 3.52e5

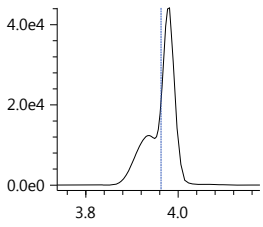


PFBS_1

Conc 0.8913
RT 3.978 Area 166197
R#1 74.47 (0.00)
Q 299.00>80.00 (-) 5.95e4

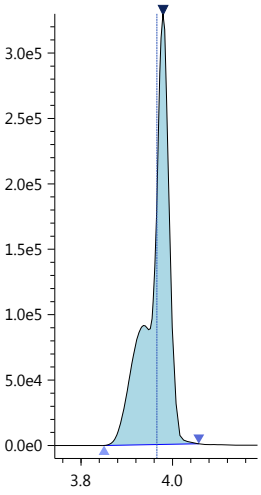


R1 298.80>99.00 (-) 4.42e4



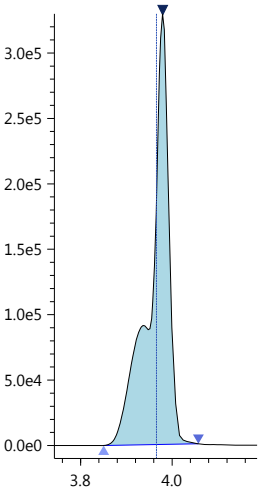
PFBS-13C

Conc 4.7264
RT 3.980 Area 915357
Q 301.80>80.00 (-) 3.30e5



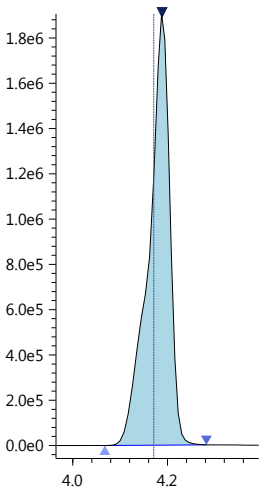
PFBS-13C_IS

Conc 5.0000
RT 3.980 Area 915357
ISTD 301.80>80.00 (-) 3.30e5



PFHxA-13C_IS

Conc 5.0000
RT 4.188 Area 5795460
ISTD 314.90>270.10 (-) 1.91e6



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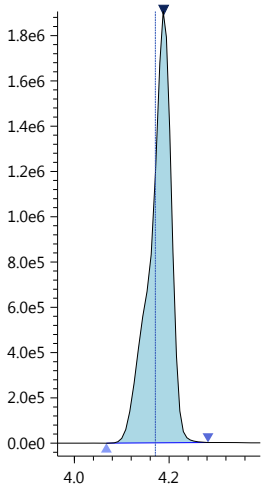
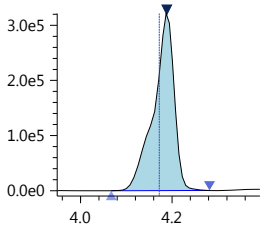
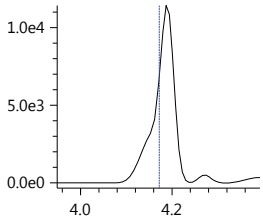
PFHxA-13C
Conc 5.0153
RT 4.188 Area 5795460
Q 314.90>270.10 (-) 1.91e6



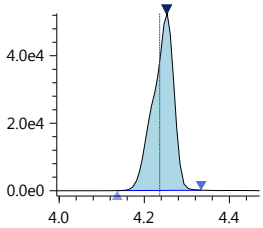
PFHxA
Conc 0.9682
RT 4.188 Area 991270
R#1 3.49 (0.00)
Q 313.00>269.00 (-) 3.21e5



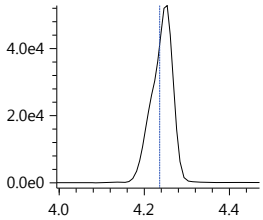
R1 313.00>119.10 (-) 1.14e4



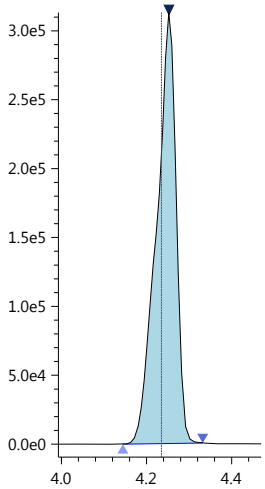
HPFO_DA
Conc 0.9483
RT 4.253 Area 175247
R#1 100.35 (0.00)
Q 329.00>169.00 (-) 5.25e4



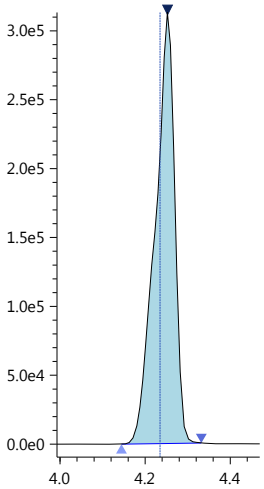
R1 329.00>285.10 (-) 5.28e4



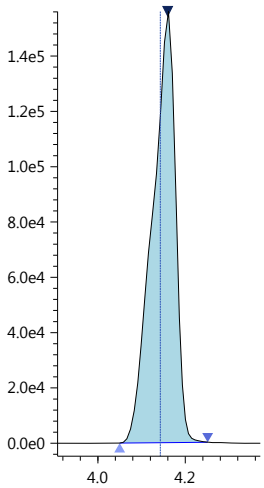
HFPO_DA-13C_IS
Conc 5.0000
RT 4.253 Area 996773
ISTD 332.00>286.80 (-) 3.13e5



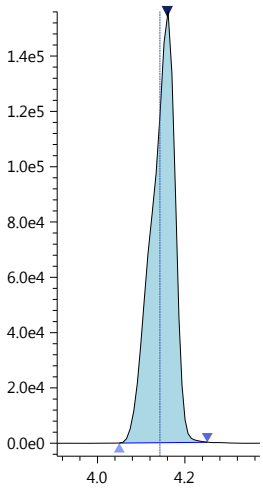
HFPO_DA-13C
Conc 4.8424
RT 4.253 Area 996773
Q 332.00>286.80 (-) 3.13e5



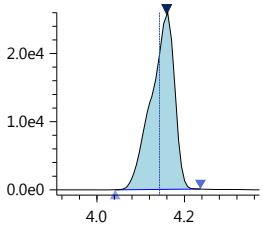
4_2-FTS-13C_IS
Conc 5.0000
RT 4.160 Area 573883
ISTD 328.80>309.05 (-) 1.56e5



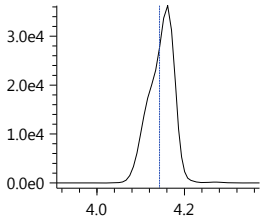
4_2-FTS-13C
Conc 4.8270
RT 4.160 Area 573883
Q 328.80>309.05 (-) 1.56e5



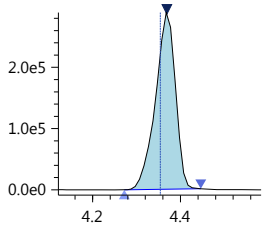
4_2-FTS_1
Conc 0.9630
RT 4.160 Area 95565
R#1 139.56 (0.00)
Q 327.00>307.05 (-) 2.60e4



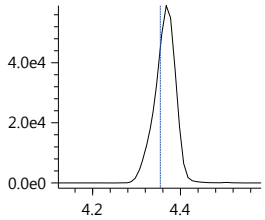
R1 327.00>81.10 (-) 3.63e4



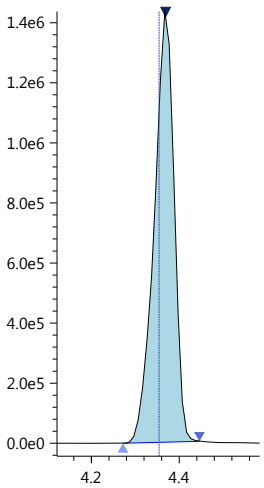
PFHpA
Conc 0.9421
RT 4.369 Area 910975
R#1 20.42 (0.00)
Q 362.90>319.00 (-) 2.89e5



R1 362.90>169.00 (-) 5.90e4



PFHpA-13C_IS
Conc 5.0000
RT 4.369 Area 4524970
ISTD 366.90>322.10 (-) 1.44e6



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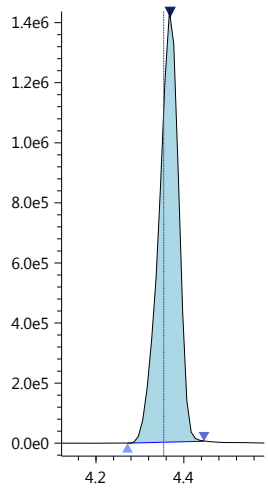
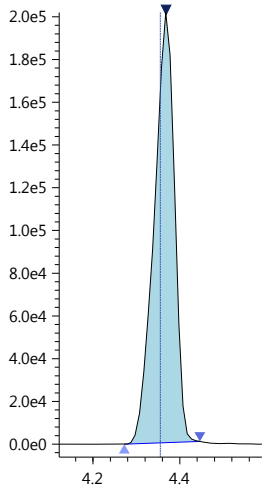
PFHpA-13C
Conc 5.2200
RT 4.369 Area 4524970

Q 366.90>322.10 (-) 1.44e6



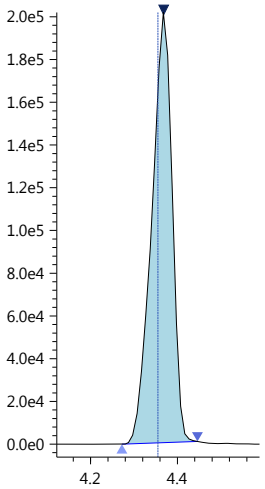
PFHxS-18O_IS
Conc 5.0000
RT 4.368 Area 657938

ISTD 402.70>84.05 (-) 2.02e5



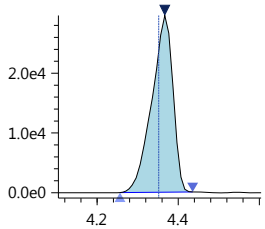
PFHxS-18O
Conc 4.9242
RT 4.368 Area 657938

Q 402.70>84.05 (-) 2.02e5

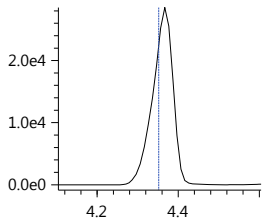


PFHxS_1
Conc 0.8434
RT 4.367 Area 106917
R#1 96.09 (0.00)

Q 399.00>80.00 (-) 2.97e4

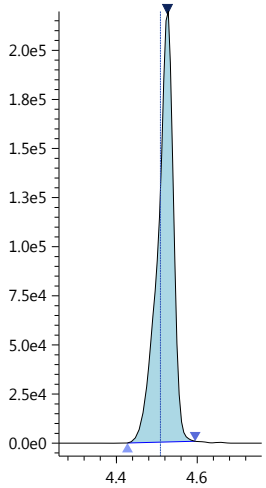


R1 399.00>99.00 (-) 2.85e4



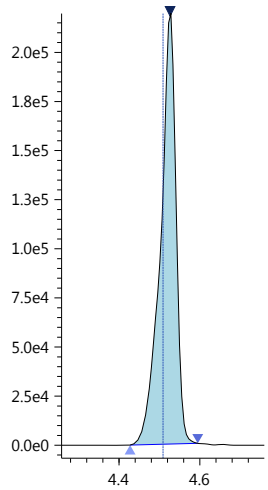
6_2-FTS-13C
Conc 4.8626
RT 4.526 Area 584540

Q 428.90>409.00 (-) 2.20e5



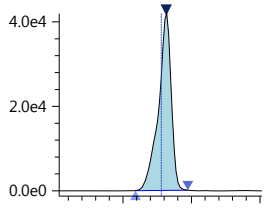
6_2-FTS-13C_IS
Conc 5.0000
RT 4.526 Area 584540

ISTD 428.90>409.00 (-) 2.20e5

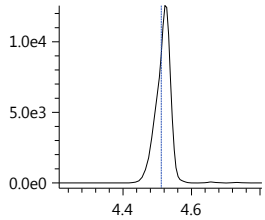


6_2-FTS_1
Conc 1.0046
RT 4.526 Area 108509
R#1 31.14 (0.00)

Q 427.00>407.00 (-) 4.20e4

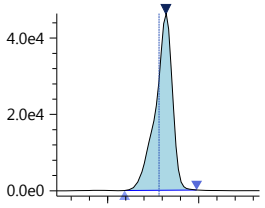


R1 427.00>80.90 (-) 1.26e4

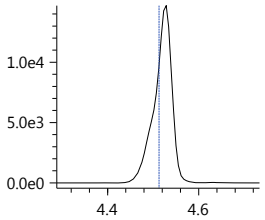


PFHpS_1
Conc 0.8977
RT 4.528 Area 119046
R#1 31.82 (0.00)

Q 449.00>80.15 (-) 4.64e4

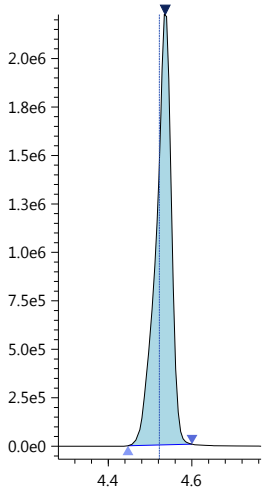


R1 449.00>99.20 (-) 1.47e4



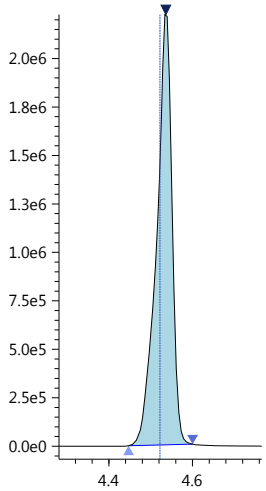
PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 5688486

ISTD 416.80>372.05 (-) 2.23e6



PFOA-13C
Conc 4.9231
RT 4.536 Area 5688486

Q 416.80>372.05 (-) 2.23e6



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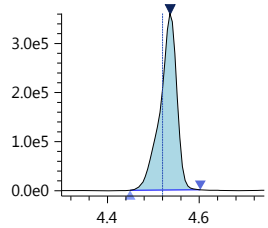
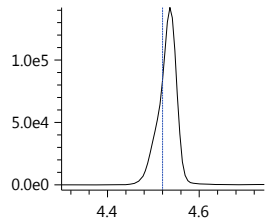
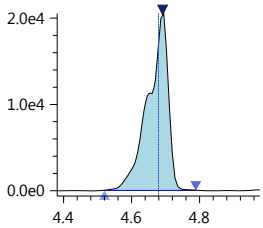
PFOA
Conc 0.9733
RT 4.537 Area 908283
R#1 39.33 (0.00)
Q 413.00>369.00 (-) 3.61e5



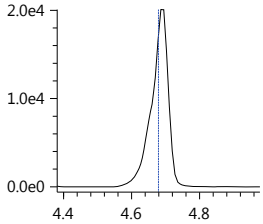
R1 413.00>169.10 (-) 1.42e5



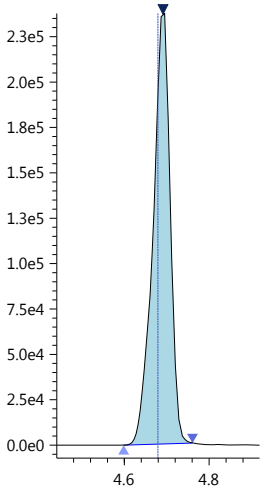
PFOS_1
Conc 0.8488
RT 4.691 Area 83990
R#1 97.52 (0.00)
Q 499.00>80.00 (-) 2.05e4



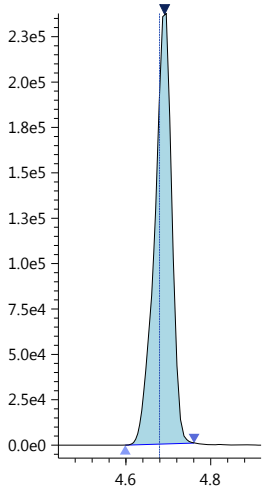
R1 499.00>99.00 (-) 2.01e4



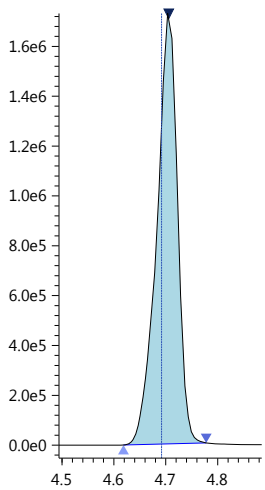
PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 670966
ISTD 502.80>80.05 (-) 2.38e5



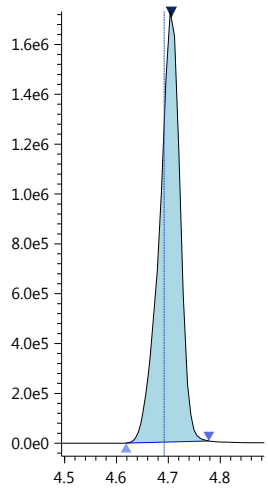
PFOS-13C
Conc 4.8115
RT 4.691 Area 670966
Q 502.80>80.05 (-) 2.38e5



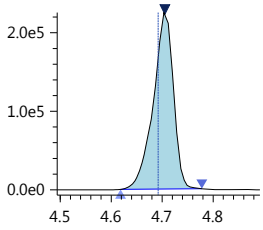
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4794824
ISTD 467.80>423.00 (-) 1.73e6



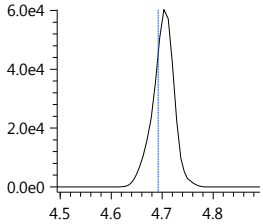
PFNA-13C
Conc 4.9872
RT 4.706 Area 4794824
Q 467.80>423.00 (-) 1.73e6



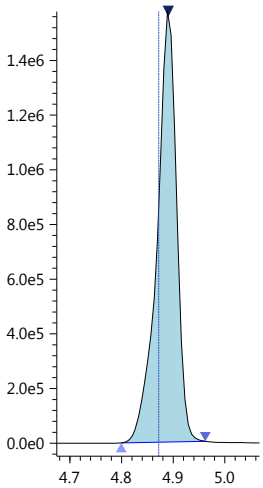
PFNA
Conc 0.9671
RT 4.705 Area 615843
R#1 26.87 (0.00)
Q 463.00>418.90 (-) 2.26e5



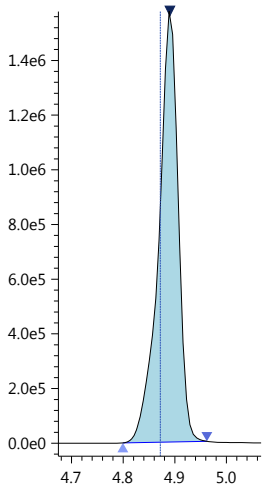
R1 463.00>219.00 (-) 6.03e4



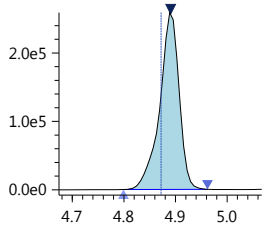
PFDA-13C_IS
Conc 5.0000
RT 4.890 Area 4138515
ISTD 514.80>469.95 (-) 1.58e6



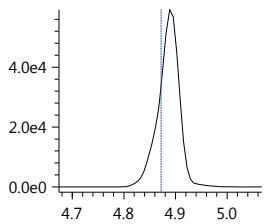
PFDA-13C
Conc 4.9309
RT 4.890 Area 4138515
Q 514.80>469.95 (-) 1.58e6



PFDA
Conc 0.9727
RT 4.891 Area 673981
R#1 22.76 (0.00)
Q 513.00>468.80 (-) 2.59e5



R1 513.00>219.10 (-) 5.92e4



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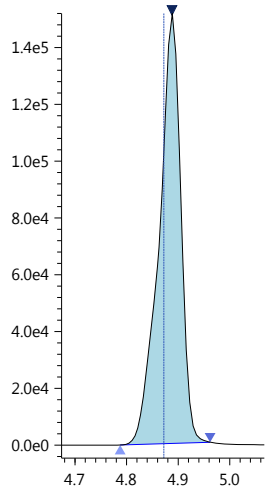
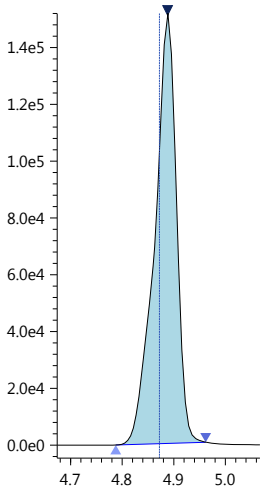
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 441391

ISTD 528.80>509.00 (-) 1.52e5



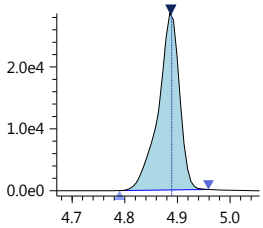
8_2-FTS-13C
Conc 4.7214
RT 4.888 Area 441391

Q 528.80>509.00 (-) 1.52e5

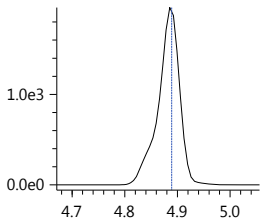


8_2-FTS_1
Conc 1.0266
RT 4.887 Area 79882
R#1 6.87 (0.00)

Q 527.10>506.90 (-) 2.86e4

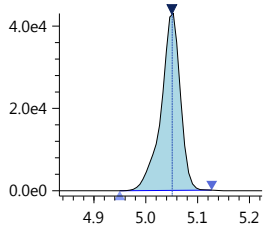


R1 527.20>487.00 (-) 1.96e3

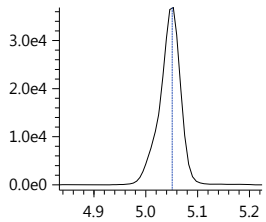


PFDS_1
Conc 0.9000
RT 5.050 Area 111033
R#1 85.42 (0.00)

Q 599.00>79.90 (-) 4.31e4

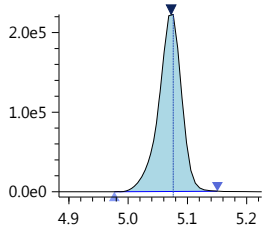


R1 599.00>99.10 (-) 3.69e4

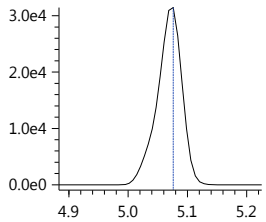


PFUnA
Conc 0.9607
RT 5.073 Area 602048
R#1 14.03 (0.00)

Q 563.00>518.90 (-) 2.23e5

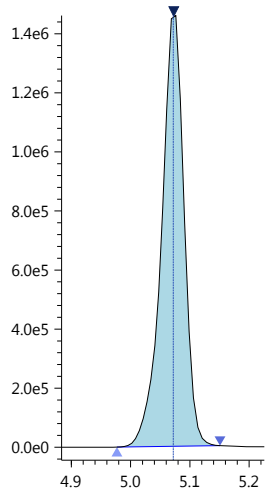


R1 563.00>219.00 (-) 3.15e4



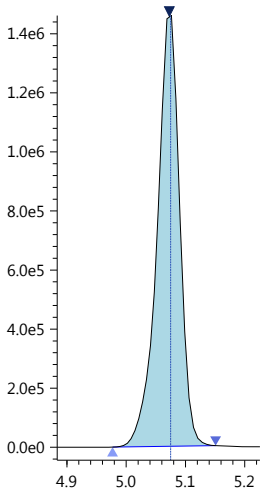
PFUnA-13C_IS
Conc 5.0000
RT 5.073 Area 3876979

ISTD 564.80>519.95 (-) 1.46e6



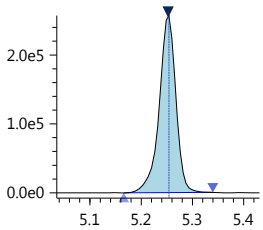
PFUnA-13C
Conc 4.9369
RT 5.073 Area 3876979

Q 564.80>519.95 (-) 1.46e6

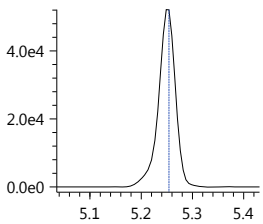


PFDoA
Conc 0.9427
RT 5.252 Area 579994
R#1 20.86 (0.00)

Q 613.05>569.00 (-) 2.57e5

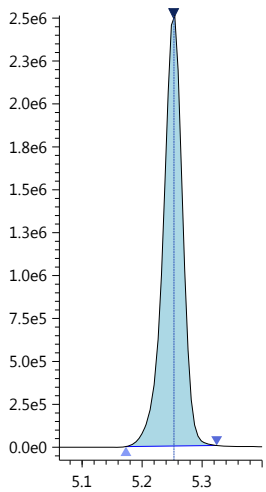


R1 613.05>169.00 (-) 5.22e4



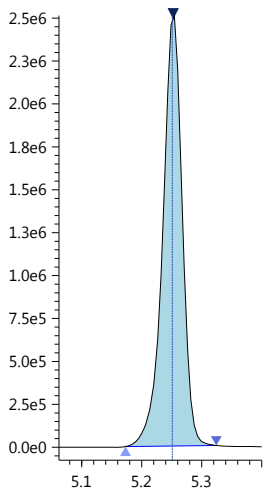
PFDoA-13C
Conc 4.9814
RT 5.252 Area 5676120

Q 614.80>569.95 (-) 2.52e6



PFDoA-13C_IS
Conc 5.0000
RT 5.252 Area 5676120

ISTD 614.80>569.95 (-) 2.52e6



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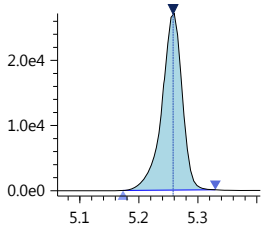
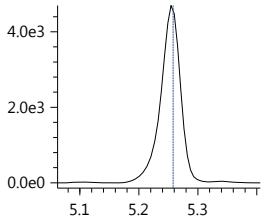
10_2-FtS_1

Conc 1.0245
RT 5.258 Area 64668
R#1 17.84 (0.00)

Q 627.00>606.95 (-) 2.72e4



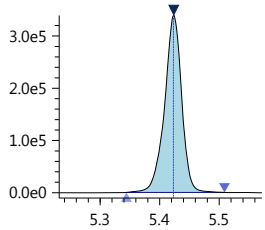
R1 627.00>81.25 (-) 4.70e3



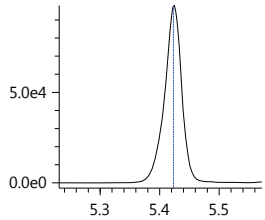
PFTrDA

Conc 0.9751
RT 5.424 Area 678409
R#1 30.06 (0.00)

Q 663.00>618.90 (-) 3.39e5



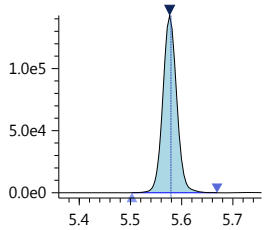
R1 662.90>169.00 (-) 9.80e4



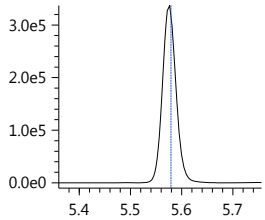
PFTeDA

Conc 1.0167
RT 5.577 Area 268486
R#1 235.65 (0.00)

Q 713.40>669.00 (-) 1.43e5



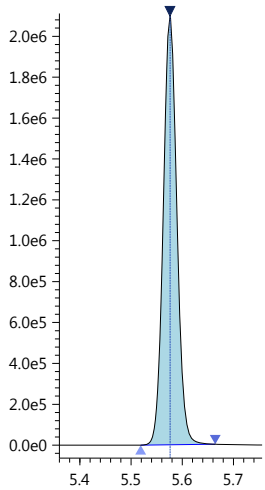
R1 713.40>169.10 (-) 3.37e5



PFTeDA-13C

Conc 4.7502
RT 5.576 Area 3873033

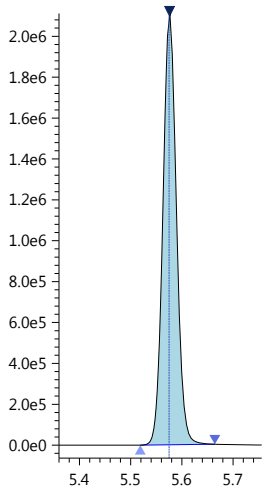
Q 714.70>669.90 (-) 2.11e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.576 Area 3873033

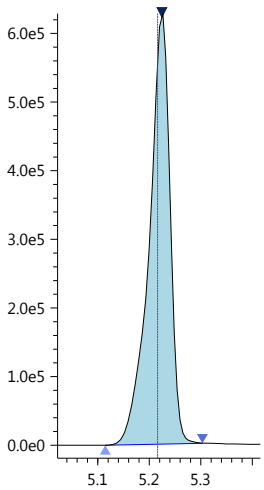
ISTD 714.70>669.90 (-) 2.11e6



FOSA-13C_IS

Conc 5.0000
RT 5.224 Area 1764198

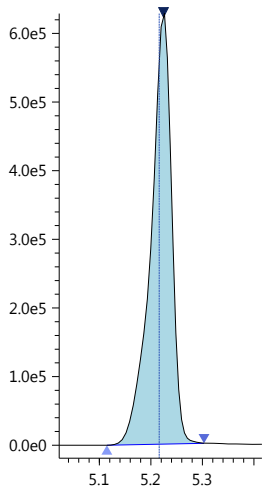
ISTD 506.00>78.05 (-) 6.29e5



FOSA-13C

Conc 4.7546
RT 5.224 Area 1764198

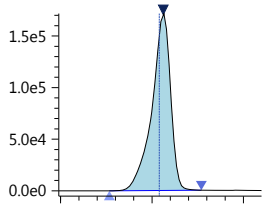
Q 506.00>78.05 (-) 6.29e5



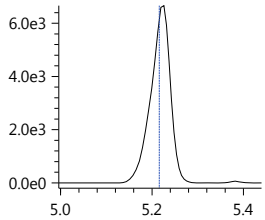
FOSA

Conc 1.0226
RT 5.225 Area 482006
R#1 3.91 (0.00)

Q 498.20>78.00 (-) 1.72e5



R1 498.20>64.10 (-) 6.66e3

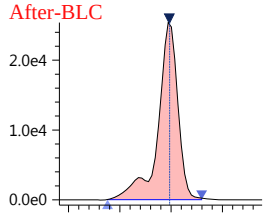


N-MeFOSAA

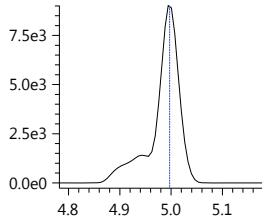
Conc 0.9489
RT 4.996 Area 68129
R#1 35.66 (0.00)

Q 570.20>419.00 (-) 2.54e4

After-BLC



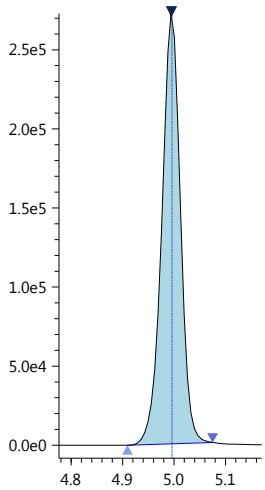
R1 570.20>512.00 (-) 9.02e3



N-MeFOSAA-d3

Conc 4.6638
RT 4.995 Area 684882

Q 572.80>419.05 (-) 2.73e5



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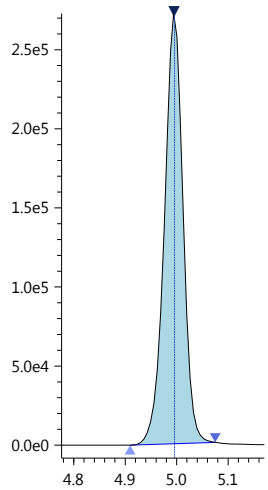
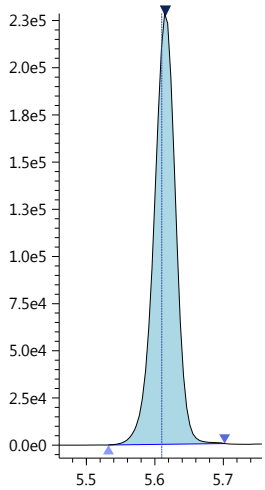
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.995 Area 684882

ISTD 572.80>419.05 (-) 2.73e5



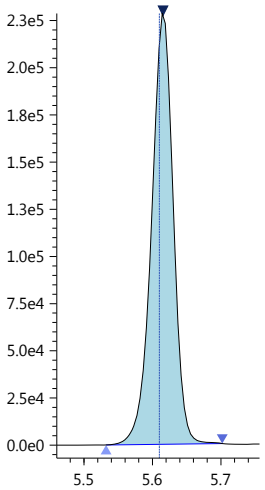
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.616 Area 504583

ISTD 514.90>168.90 (-) 2.29e5



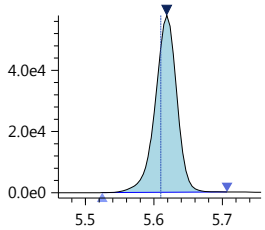
N-MeFOSA-d3
Conc 4.7789
RT 5.616 Area 504583

Q 514.90>168.90 (-) 2.29e5

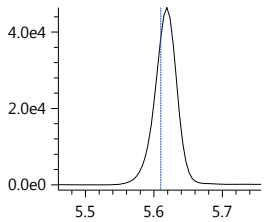


N-MeFOSA
Conc 0.9511
RT 5.619 Area 126728
R#1 79.55 (0.00)

Q 512.00>169.10 (-) 5.79e4

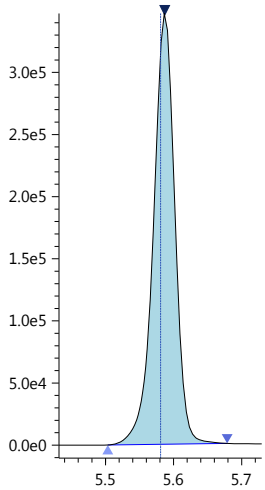


R1 512.00>219.00 (-) 4.64e4



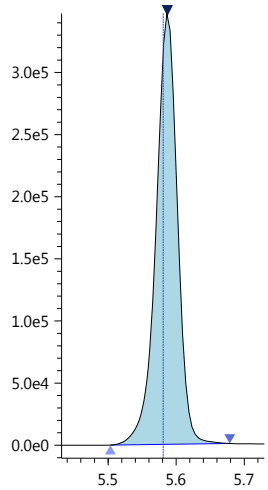
N-MeFOSE-d7
Conc 4.9509
RT 5.587 Area 759369

Q 622.70>59.10 (-) 3.47e5



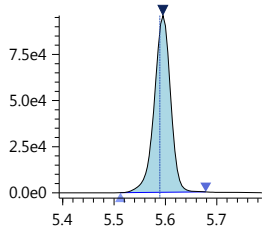
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.587 Area 759369

ISTD 622.70>59.10 (-) 3.47e5

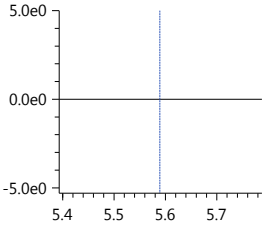


N-MeFOSE
Conc 0.9582
RT 5.595 Area 211410
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 9.61e4



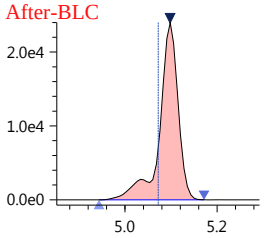
R1 556.00>121.20 (-) 0.00e0



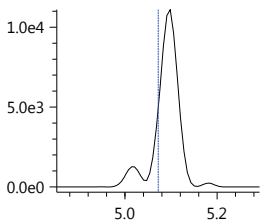
N-EtFOSAA
Conc 1.0952
RT 5.098 Area 66792
R#1 45.52 (0.00)

Q 584.20>418.95 (-) 2.40e4

After-BLC

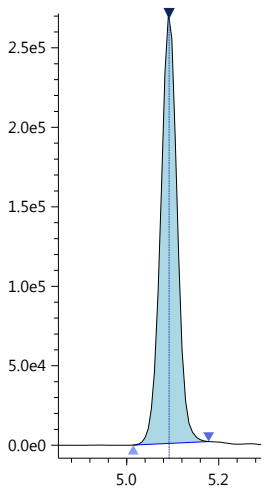


R1 584.20>526.10 (-) 1.11e4



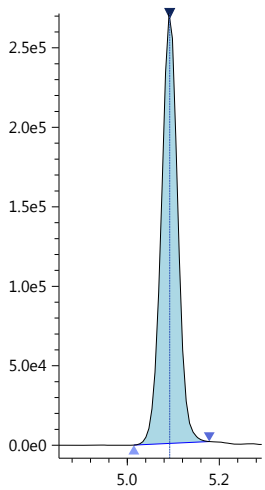
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 679001

ISTD 588.80>419.00 (-) 2.72e5



N-EtFOSAA-d5
Conc 4.8161
RT 5.092 Area 679001

Q 588.80>419.00 (-) 2.72e5



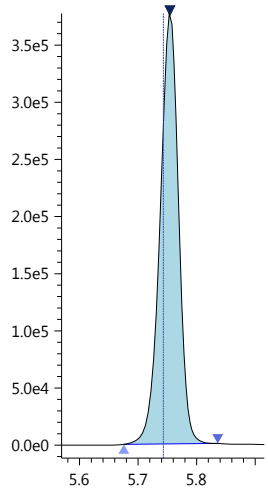
Insight Report

Printed at 1/7/2019 12:54:42 PM

N-EtFOSA-d9_IS

Conc 5.0000
RT 5.754 Area 831309

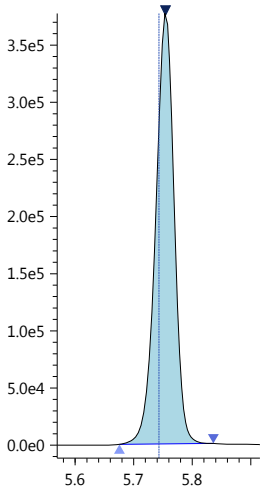
ISTD 530.90>169.15 (-) 3.78e5



N-EtFOSA-d9

Conc 4.6955
RT 5.754 Area 831309

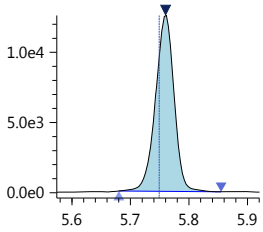
Q 530.90>169.15 (-) 3.78e5



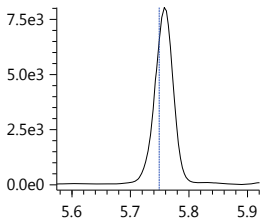
N-EtFOSA

Conc 0.9431
RT 5.760 Area 27790
R#1 64.62 (0.00)

Q 526.90>169.10 (-) 1.26e4



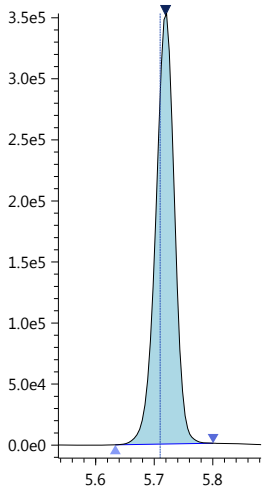
R1 526.90>219.00 (-) 8.04e3



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.719 Area 790345

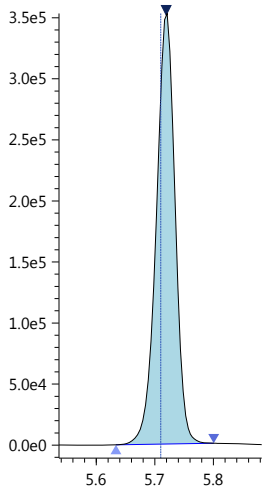
ISTD 638.70>59.10 (-) 3.53e5



N-EtFOSE-d9

Conc 4.7745
RT 5.719 Area 790345

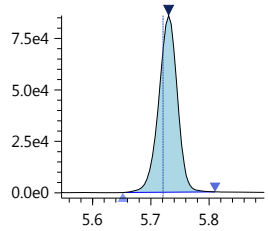
Q 638.70>59.10 (-) 3.53e5



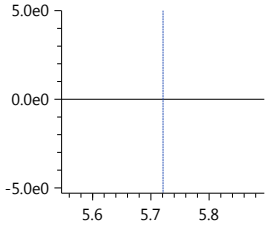
N-EtFOSE

Conc 0.9932
RT 5.730 Area 190931
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 8.61e4



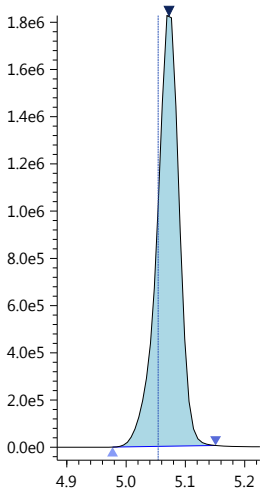
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.072 Area 4839471

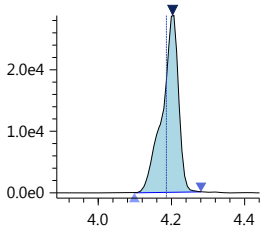
ISTD 570.00>525.00 (-) 1.83e6



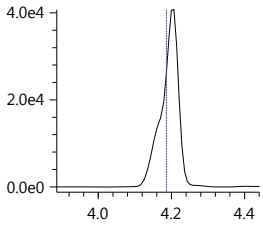
PFPeS

Conc 0.9720
RT 4.203 Area 89192
R#1 141.13 (0.00)

Q 349.00>99.00 (-) 2.88e4



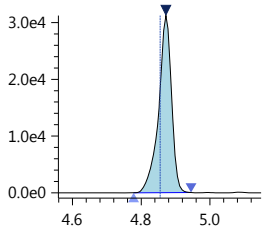
R1 349.00>79.95 (-) 4.07e4



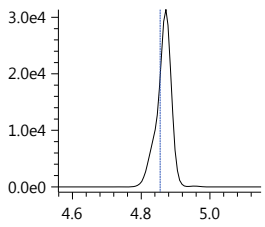
PFNS

Conc 0.9595
RT 4.872 Area 81629
R#1 99.93 (0.00)

Q 549.00>99.00 (-) 3.12e4



R1 549.00>79.95 (-) 3.14e4



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Printed at 1/7/2019 10:13:37 AM

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Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_019.lcd
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PFBA-13C_IS
Conc 5.0000
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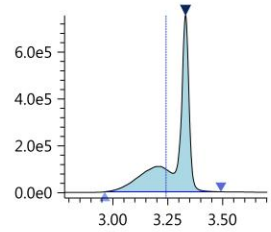
ISTD 216.90>172.15 (-) 7.56e5



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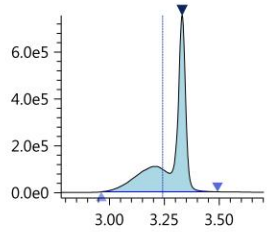

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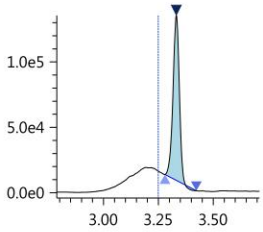
Q 213.00>169.10 (-) 1.36e5



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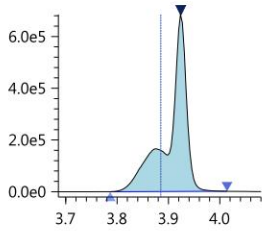
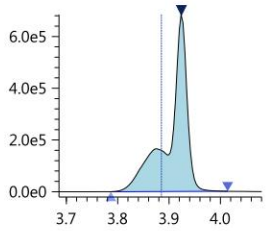
Conc 5.0000
RT 3.924 Area 1647481
ISTD 267.90>223.00 (-) 6.85e5



PFPeA-13C
Conc 4.9357
RT 3.924 Area 1647481
Q 267.90>223.00 (-) 6.85e5



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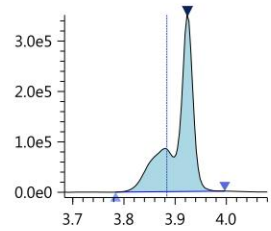
Conc 0.6131
RT 3.924 Area 836381
Q 263.05>219.10 (-) 3.52e5



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RT 3.978 Area 166197
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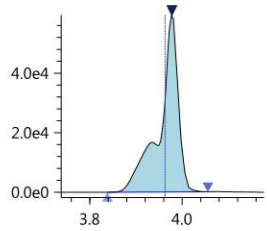
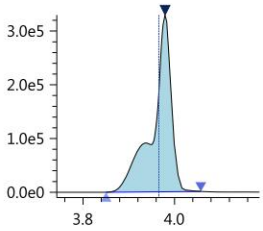


PFBS-13C
Conc 4.9375
RT 3.980 Area 915357
Q 301.80>80.00 (-) 3.30e5



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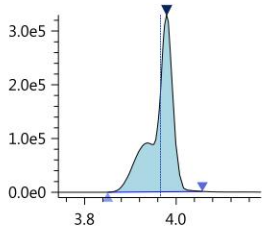

PFHxA-13C_IS
Conc 5.0000
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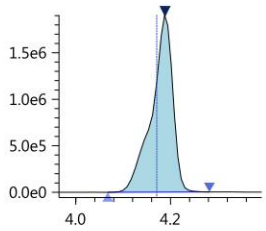

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Conc 5.0880
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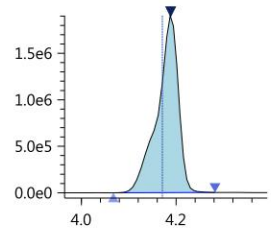
Q 314.90>270.10 (-) 1.91e6



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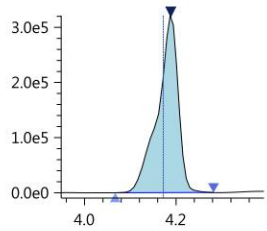
Conc 0.9673
RT 4.188 Area 991270
Q 313.00>269.00 (-) 3.21e5



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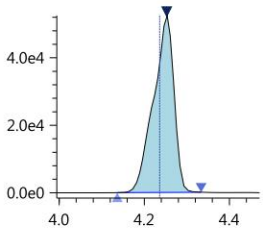
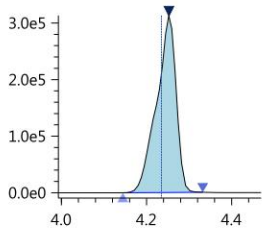
Conc 0.9869
RT 4.253 Area 175247
Q 329.00>169.00 (-) 5.25e4



HFPO_DA-13C_IS
Conc 5.0000
RT 4.253 Area 996773
ISTD 332.00>286.80 (-) 3.13e5



HFPO_DA-13C
Conc 4.9765
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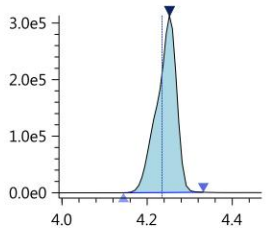
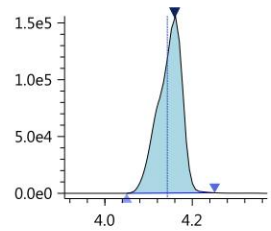
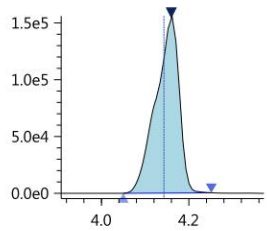
Q 332.00>286.80 (-) 3.13e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.160 Area 573883
ISTD 328.80>309.05 (-) 1.56e5



4_2-FTS-13C
Conc 5.0153
RT 4.160 Area 573883
Q 328.80>309.05 (-) 1.56e5



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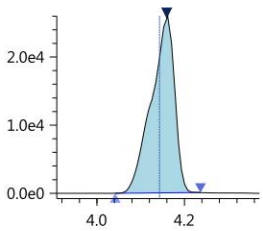
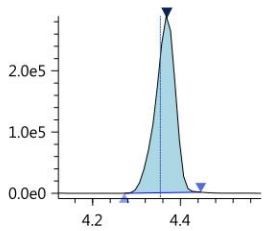
Conc 1.0032
RT 4.160 Area 95565
Q 327.00>307.05 (-) 2.60e4



PFHpA
Conc 0.9314
RT 4.369 Area 910975
Q 362.90>319.00 (-) 2.89e5



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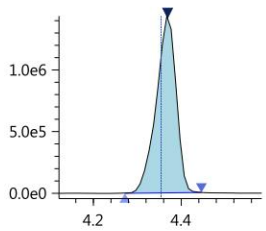
ISTD 366.90>322.10 (-) 1.44e6



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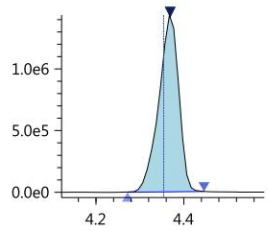
PFHpA-13C
Conc 5.2631
RT 4.369 Area 4524970
Q 366.90>322.10 (-) 1.44e6



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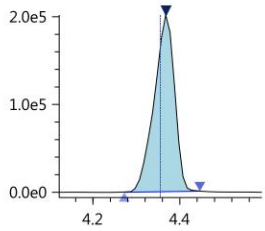
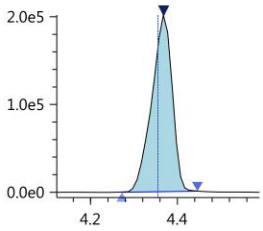
Conc 5.0000
RT 4.368 Area 657938
ISTD 402.70>84.05 (-) 2.02e5



PFHxS-18O
Conc 4.9051
RT 4.368 Area 657938
Q 402.70>84.05 (-) 2.02e5



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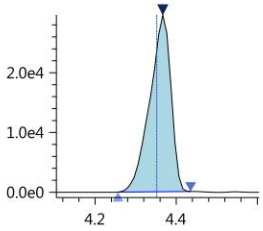
RT 4.367 Area 106917
Q 399.00>80.00 (-) 2.97e4



6_2-FTS-13C
Conc 4.7119
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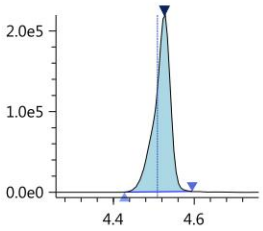
Q 428.90>409.00 (-) 2.20e5



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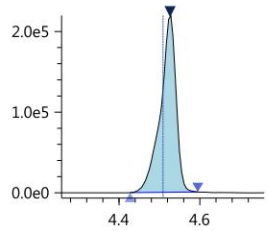
Conc 5.0000
RT 4.526 Area 584540
ISTD 428.90>409.00 (-) 2.20e5



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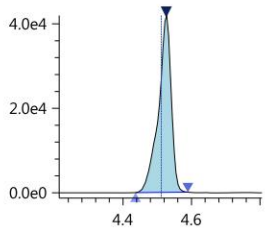
RT 4.526 Area 108509
Q 427.00>407.00 (-) 4.20e4



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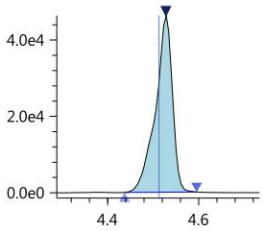
RT 4.528 Area 119046
Q 449.00>80.15 (-) 4.64e4



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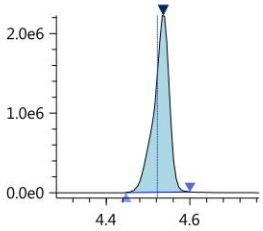
Conc 5.0000
RT 4.536 Area 5688486
ISTD 416.80>372.05 (-) 2.23e6



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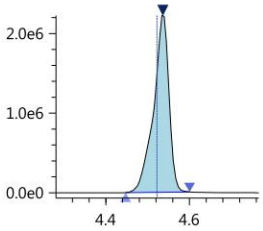
RT 4.536 Area 5688486
Q 416.80>372.05 (-) 2.23e6



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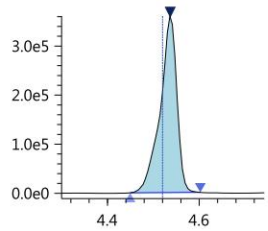
Q 413.00>369.00 (-) 3.61e5



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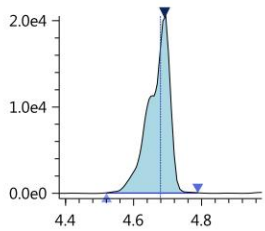
Q 499.00>80.00 (-) 2.05e4



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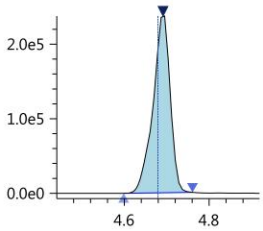
RT 4.691 Area 670966
ISTD 502.80>80.05 (-) 2.38e5



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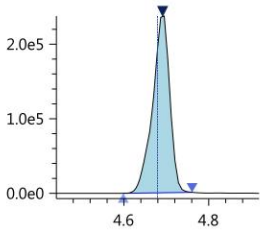
Q 502.80>80.05 (-) 2.38e5



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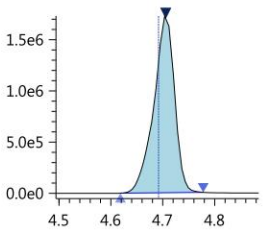
RT 4.706 Area 4794824
ISTD 467.80>423.00 (-) 1.73e6



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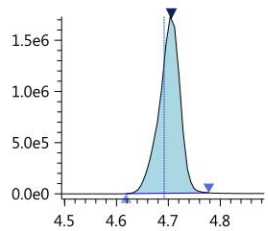
Conc 4.9094
RT 4.706 Area 4794824
Q 467.80>423.00 (-) 1.73e6



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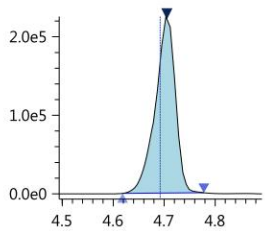
Q 463.00>418.90 (-) 2.26e5



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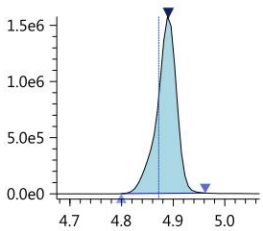
ISTD 514.80>469.95 (-) 1.58e6



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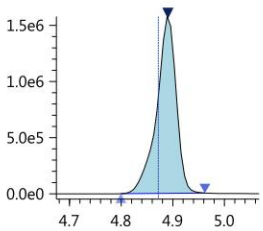

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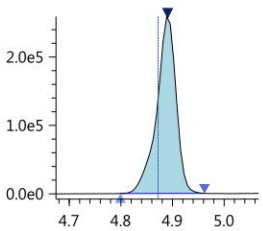
RT 4.891 Area 673981
Q 513.00>468.80 (-) 2.59e5



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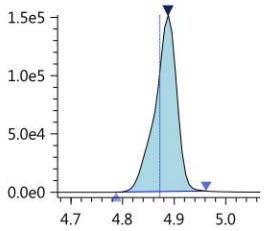
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 441391
ISTD 528.80>509.00 (-) 1.52e5



8_2-FTS-13C
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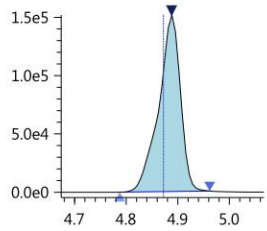

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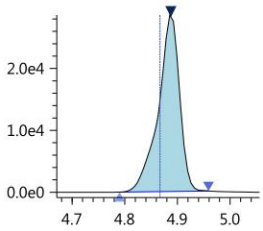
Conc 1.0218
RT 4.887 Area 79882
Q 527.10>506.90 (-) 2.86e4



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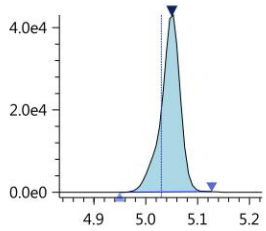
Q 599.00>79.90 (-) 4.31e4



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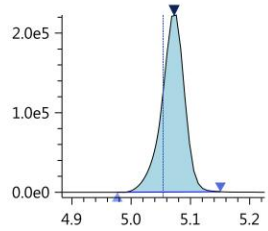

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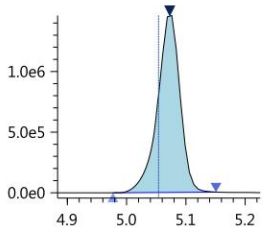
ISTD 564.80>519.95 (-) 1.46e6



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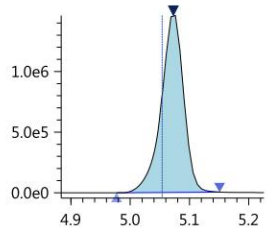

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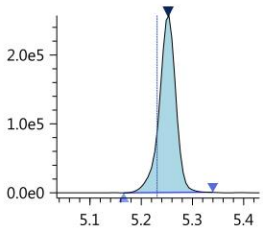
Conc 1.0133
RT 5.252 Area 579994
Q 613.05>569.00 (-) 2.57e5



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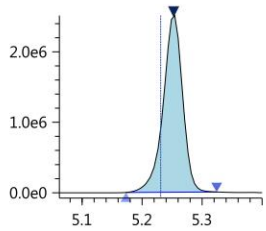
RT 5.252 Area 5676120
Q 614.80>569.95 (-) 2.52e6



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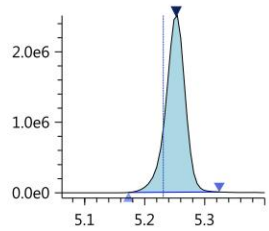
ISTD 614.80>569.95 (-) 2.52e6



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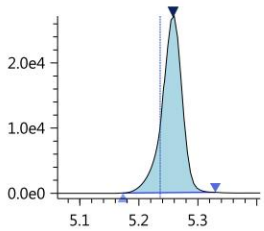
Q 627.00>606.95 (-) 2.72e4



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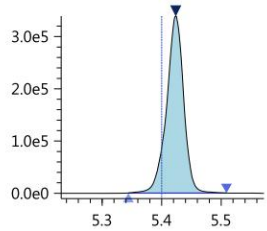

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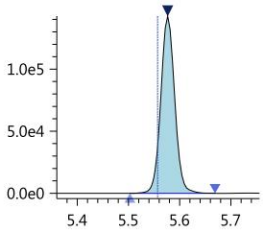
Conc 0.5894
RT 5.577 Area 268486
Q 713.40>669.00 (-) 1.43e5



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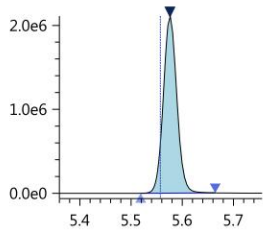
Q 714.70>669.90 (-) 2.11e6



PFTeDA-13C_IS
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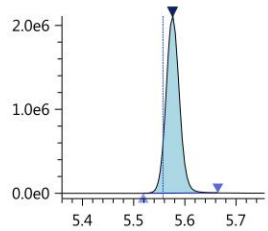
ISTD 714.70>669.90 (-) 2.11e6



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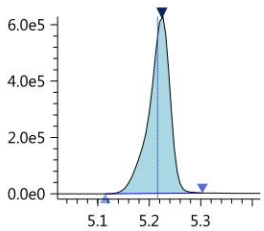
RT 5.224 Area 1764198
ISTD 506.00>78.05 (-) 6.29e5



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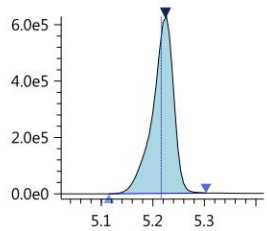
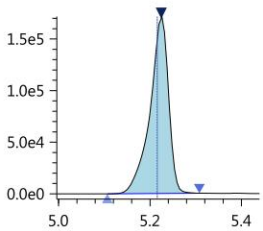
Q 506.00>78.05 (-) 6.29e5



FOSA
Conc 1.0352
RT 5.225 Area 482006
Q 498.20>78.00 (-) 1.72e5



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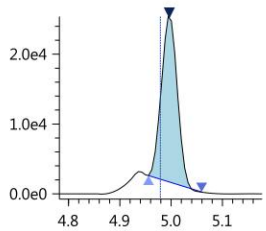
Conc 0.9198
RT 4.996 Area 51420
Q 570.20>419.00 (-) 2.54e4



N-MeFOSAA-d3
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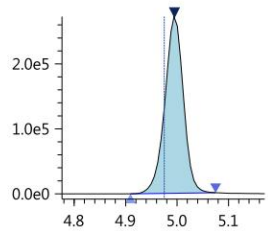
RT 4.995 Area 684882
Q 572.80>419.05 (-) 2.73e5



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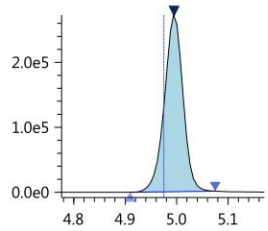
ISTD 572.80>419.05 (-) 2.73e5



N-MeFOSA-d3_IS
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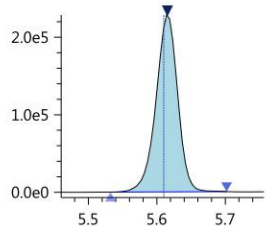
ISTD 514.90>168.90 (-) 2.29e5



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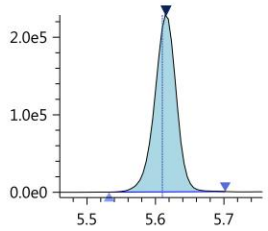
RT 5.616 Area 504583
Q 514.90>168.90 (-) 2.29e5



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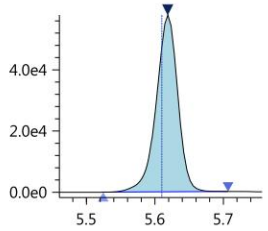
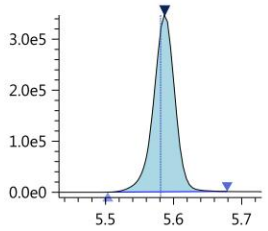
RT 5.619 Area 126728
Q 512.00>169.10 (-) 5.79e4



N-MeFOSE-d7
Conc 5.0892
RT 5.587 Area 759369
Q 622.70>59.10 (-) 3.47e5



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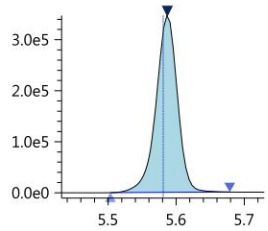
Conc 5.0000
RT 5.587 Area 759369
ISTD 622.70>59.10 (-) 3.47e5



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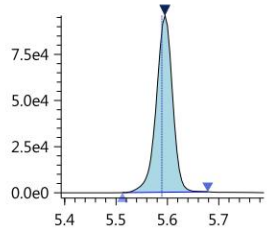
Conc 0.9737
RT 5.595 Area 211410
Q 616.00>59.00 (-) 9.61e4



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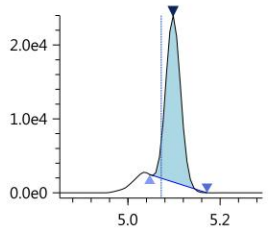
RT 5.098 Area 50701
Q 584.20>418.95 (-) 2.40e4



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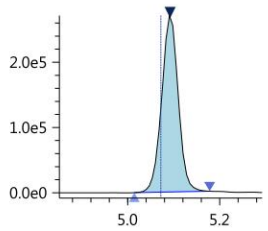
ISTD 588.80>419.00 (-) 2.72e5



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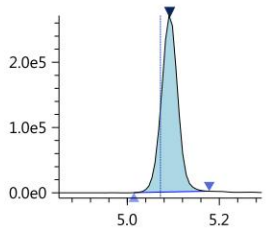

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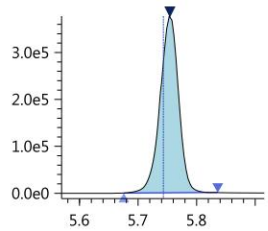
ISTD 530.90>169.15 (-) 3.78e5



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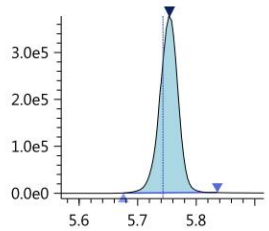
Conc 4.9307
RT 5.754 Area 831309
Q 530.90>169.15 (-) 3.78e5



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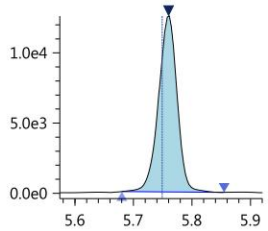
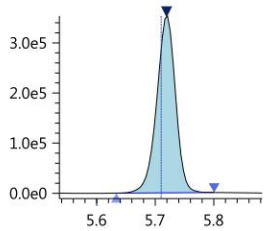
RT 5.760 Area 27790
Q 526.90>169.10 (-) 1.26e4



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.719 Area 790345
ISTD 638.70>59.10 (-) 3.53e5



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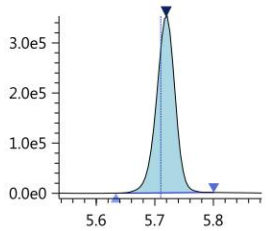
Q 638.70>59.10 (-) 3.53e5



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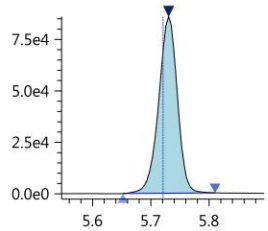
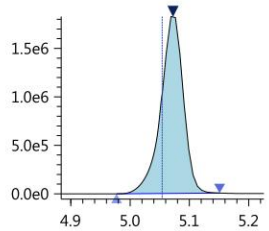
Conc 1.0001
RT 5.730 Area 190931
Q 630.00>58.90 (-) 8.61e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.072 Area 4839471
ISTD 570.00>525.00 (-) 1.83e6



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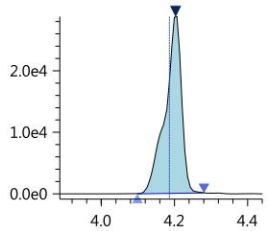
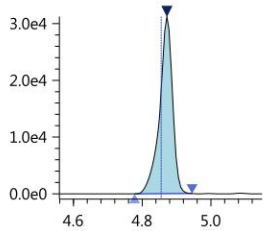
Conc 1.0421
RT 4.203 Area 89192
Q 349.00>99.00 (-) 2.88e4



PFNS
Conc 1.1065
RT 4.872 Area 81629
Q 549.00>99.00 (-) 3.12e4



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_020

Sample ID: 5.0 PPB ICAL
Date acquired: 1/4/2019 5:48:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_020.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.327	2896680	2896680	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.327	2896680	4362512	26	5.1746	ng/mL	5.0000
PFBA	M	3.329	2622408	2896680	2	5.1325	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.922	1647861	1647861	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.922	1647861	4362512	26	5.2825	ng/mL	5.0000
PFPeA	Auto	3.922	4059672	1647861	4	4.9643	ng/mL	5.0000
PFBS_1	Auto	3.976	849476	912546	16	4.5698	ng/mL	4.4368
PFBS-13C	Auto	3.978	912546	4362512	26	5.2270	ng/mL	5.0000
PFBS-13C_IS	Auto	3.978	912546	912546	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.186	5330579	5330579	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.186	5330579	4362512	26	5.1173	ng/mL	5.0000
PFHxA	Auto	4.187	4731455	5330579	6	5.0330	ng/mL	5.0000
HPFO_DA	Auto	4.250	914010	922804	3	5.3422	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.250	922804	922804	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.250	922804	4362512	26	4.9732	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.157	558015	558015	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.157	558015	4362512	26	5.2066	ng/mL	5.0000
4_2-FTS_1	Auto	4.157	446940	558015	5	4.6318	ng/mL	4.6861
PFHpA	Auto	4.368	4135670	4042467	8	4.7905	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.368	4042467	4042467	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.368	4042467	4362512	26	5.1733	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.367	577493	577493	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.367	577493	4362512	26	4.7947	ng/mL	5.0000
PFHxS_1	Auto	4.364	506873	577493	7	4.5553	ng/mL	4.5654
6_2-FTS-13C	Auto	4.524	554530	4362512	26	5.1173	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.524	554530	554530	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.525	489105	554530	10	4.7733	ng/mL	4.7558
PFHpS_1	Auto	4.526	613157	577493	7	5.2675	ng/mL	4.7672
PFOA-13C_IS	Auto	4.535	5437719	5437719	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.535	5437719	4362512	26	5.2206	ng/mL	5.0000
PFOA	Auto	4.535	4320010	5437719	9	4.8453	ng/mL	5.0000
PFOS_1	Auto	4.689	462171	683242	13	4.5867	ng/mL	4.6461
PFOS-13C_IS	Auto	4.690	683242	683242	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.690	683242	4362512	26	5.4352	ng/mL	5.0000
PFNA-13C_IS	Auto	4.703	4171893	4171893	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.703	4171893	4362512	26	4.8137	ng/mL	5.0000
PFNA	Auto	4.703	2888183	4171893	11	5.1997	ng/mL	5.0000
PFDA-13C_IS	Auto	4.888	3799828	3799828	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.888	3799828	4362512	26	5.0223	ng/mL	5.0000
PFDA	Auto	4.888	3138210	3799828	12	4.9328	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.886	426119	426119	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.886	426119	4362512	26	5.0564	ng/mL	5.0000
8_2-FTS_1	Auto	4.885	351512	426119	15	4.6796	ng/mL	4.8002
PFDS_1	Auto	5.048	550111	683242	13	4.3790	ng/mL	4.8233
PFUnA	Auto	5.071	2889999	3559602	14	5.0244	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.070	3559602	3559602	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.070	3559602	4362512	26	5.0283	ng/mL	5.0000
PFDoA	Auto	5.250	2839321	5303651	17	4.8984	ng/mL	5.0000
PFDoA-13C	Auto	5.250	5303651	4362512	26	5.1634	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.250	5303651	5303651	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.256	304136	426119	15	4.9910	ng/mL	4.8310
PFTrDA	Auto	5.421	3431935	3723084	22	5.1401	ng/mL	5.0000
PFTeDA	Auto	5.573	1189412	3723084	22	5.0867	ng/mL	5.0000
PFTeDA-13C	Auto	5.573	3723084	4362512	26	5.0656	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.573	3723084	3723084	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.222	1748050	1748050	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.222	1748050	4362512	26	5.2262	ng/mL	5.0000
FOSA	Auto	5.222	2388858	1748050	18	5.1151	ng/mL	5.0000
N-MeFOSAA	M	4.995	380806	708886	19	5.1245	ng/mL	5.0000
N-MeFOSAA-d3	Auto	4.992	708886	4362512	26	5.3550	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.992	708886	708886	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.613	479751	479751	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.613	479751	4362512	26	5.0405	ng/mL	5.0000
N-MeFOSA	Auto	5.616	659500	479751	1	5.2058	ng/mL	5.0000
N-MeFOSE-d7	Auto	5.585	729062	4362512	26	5.2730	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.585	729062	729062	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.593	1078299	729062	20	5.0904	ng/mL	5.0000

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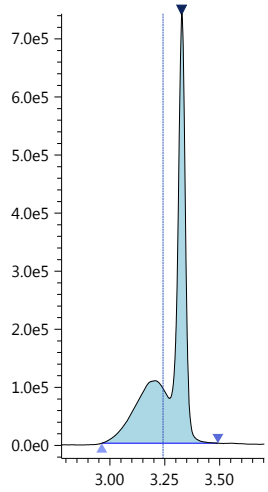
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.093	300594	650424	21	5.0386	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.090	650424	650424	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.090	650424	4362512	26	5.1178	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.752	844270	844270	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.752	844270	4362512	26	5.2900	ng/mL	5.0000
N-EtFOSA	Auto	5.758	146388	844270	23	4.8919	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.717	771517	771517	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.717	771517	4362512	26	5.1704	ng/mL	5.0000
N-EtFOSE	Auto	5.728	958989	771517	24	5.1105	ng/mL	5.0000
13C7-PFUnDA_IS	Auto	5.070	4362512	4362512	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.202	429376	912546	16	4.6937	ng/mL	4.7046
PFNS	Auto	4.869	410920	683242	13	4.7434	ng/mL	4.8079

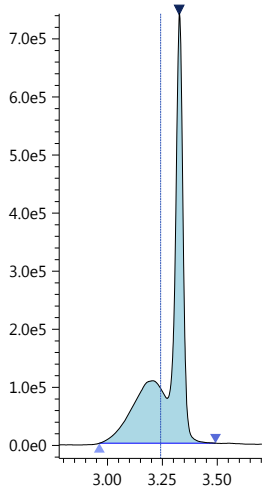
PFBA-13C_IS

Conc 5.0000
RT 3.327 Area 2896680
ISTD 216.90>172.15 (-) 7.43e5



PFBA-13C

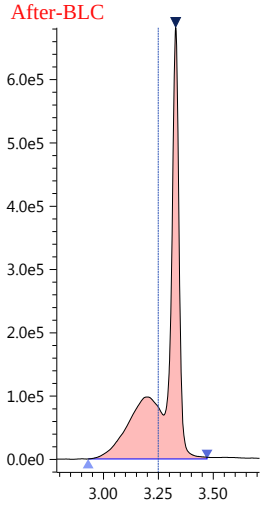
Conc 5.1746
RT 3.327 Area 2896680
Q 216.90>172.15 (-) 7.43e5



PFBA

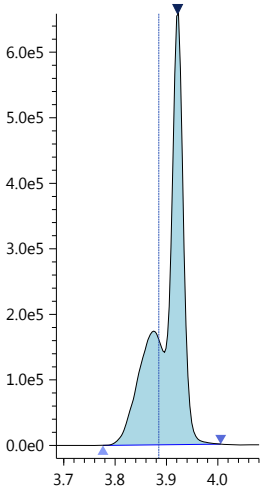
Conc 5.1325
RT 3.329 Area 2622408
Q 213.00>169.10 (-) 6.82e5

After-BLC



PFPeA-13C_IS

Conc 5.0000
RT 3.922 Area 1647861
ISTD 267.90>223.00 (-) 6.59e5



PFPeA-13C

Conc 5.2825
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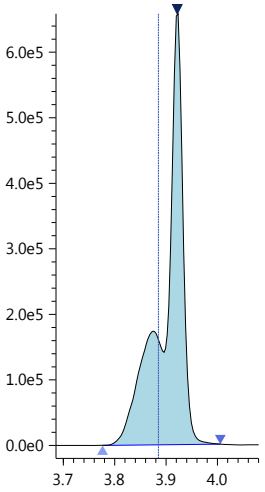
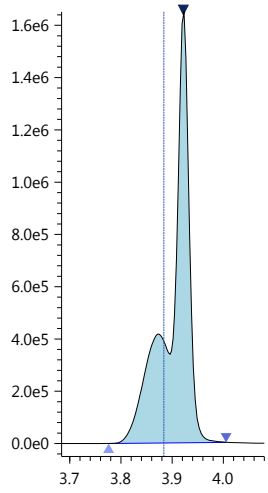
Q 267.90>223.00 (-) 6.59e5



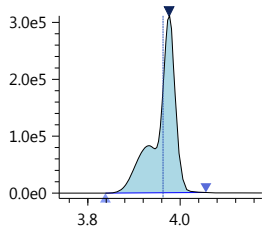
PFPeA

Conc 4.9643
RT 3.922 Area 4059672
Q 263.05>219.10 (-) 1.65e6

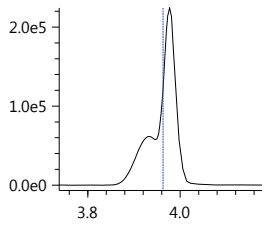


PFBS_1

Conc 4.5698
RT 3.976 Area 849476
R#1 69.54 (0.00)
Q 299.00>80.00 (-) 3.12e5

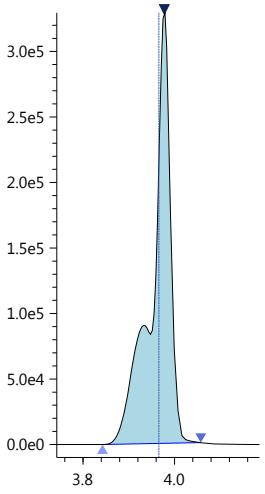


R1 298.80>99.00 (-) 2.24e5



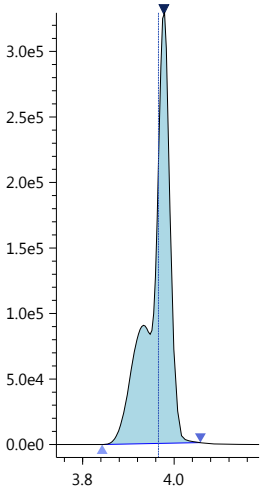
PFBS-13C

Conc 5.2270
RT 3.978 Area 912546
Q 301.80>80.00 (-) 3.29e5



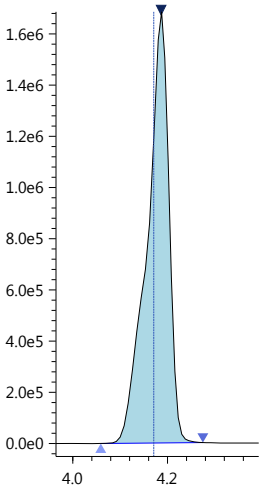
PFBS-13C_IS

Conc 5.0000
RT 3.978 Area 912546
ISTD 301.80>80.00 (-) 3.29e5



PFHxA-13C_IS

Conc 5.0000
RT 4.186 Area 5330579
ISTD 314.90>270.10 (-) 1.69e6



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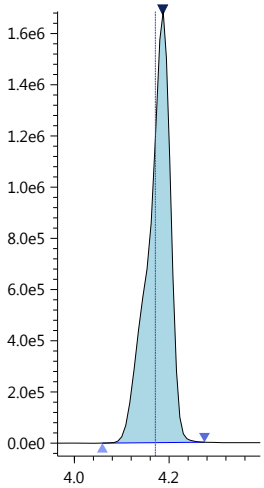
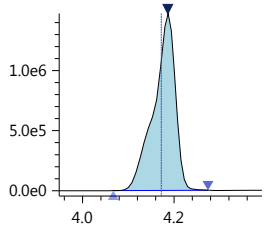
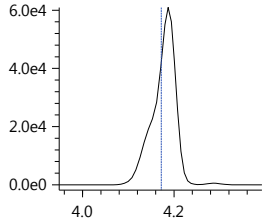
PFHxA-13C
Conc 5.1173
RT 4.186 Area 5330579
Q 314.90>270.10 (-) 1.69e6



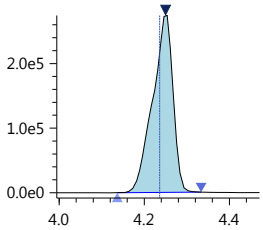
PFHxA
Conc 5.0330
RT 4.187 Area 4731455
R#1 4.10 (0.00)
Q 313.00>269.00 (-) 1.48e6



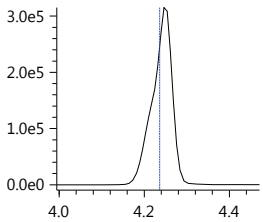
R1 313.00>119.10 (-) 6.09e4



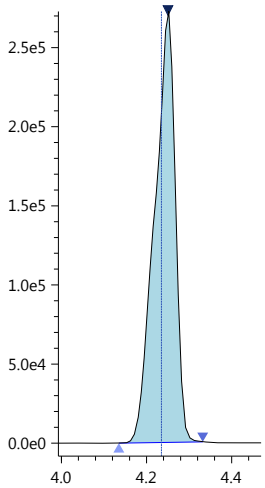
HPFO_DA
Conc 5.3422
RT 4.250 Area 914010
R#1 115.83 (0.00)
Q 329.00>169.00 (-) 2.74e5



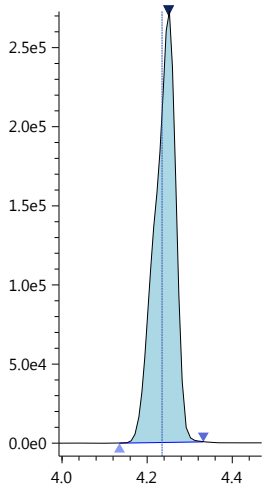
R1 329.00>285.10 (-) 3.15e5



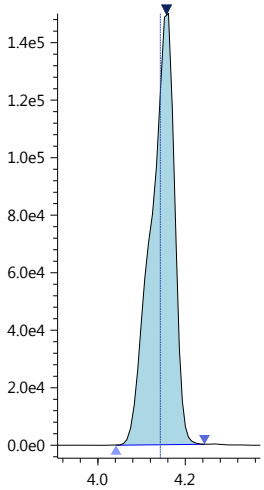
HFPO_DA-13C_IS
Conc 5.0000
RT 4.250 Area 922804
ISTD 332.00>286.80 (-) 2.73e5



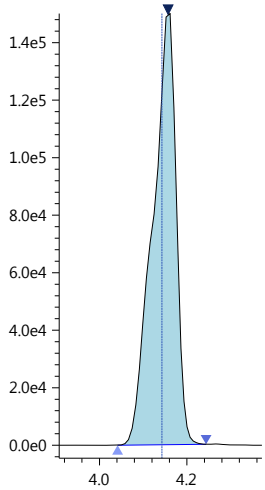
HFPO_DA-13C
Conc 4.9732
RT 4.250 Area 922804
Q 332.00>286.80 (-) 2.73e5



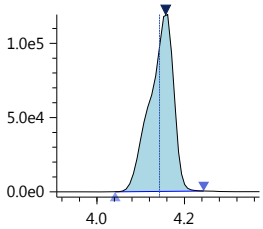
4_2-FTS-13C_IS
Conc 5.0000
RT 4.157 Area 558015
ISTD 328.80>309.05 (-) 1.50e5



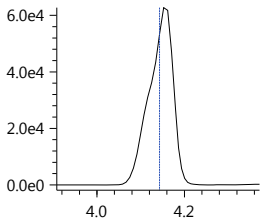
4_2-FTS-13C
Conc 5.2066
RT 4.157 Area 558015
Q 328.80>309.05 (-) 1.50e5



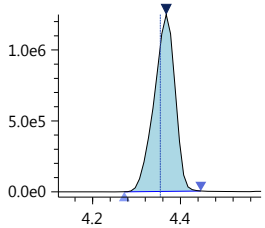
4_2-FTS_1
Conc 4.6318
RT 4.157 Area 446940
R#1 53.26 (0.00)
Q 327.00>307.05 (-) 1.19e5



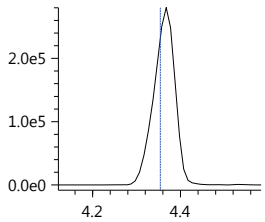
R1 327.00>81.10 (-) 6.27e4



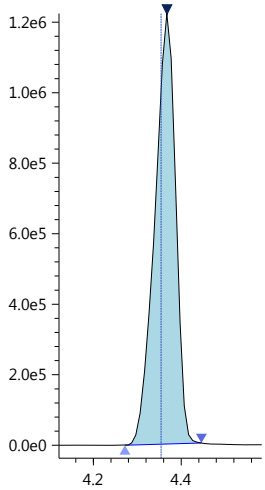
PFHpA
Conc 4.7905
RT 4.368 Area 4135670
R#1 22.46 (0.00)
Q 362.90>319.00 (-) 1.25e6



R1 362.90>169.00 (-) 2.80e5



PFHpA-13C_IS
Conc 5.0000
RT 4.368 Area 4042467
ISTD 366.90>322.10 (-) 1.22e6



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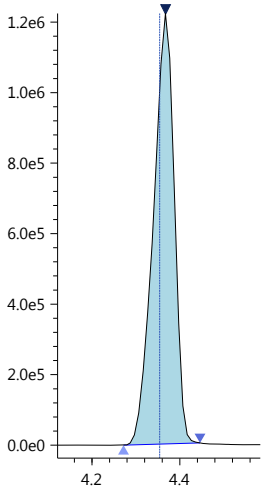
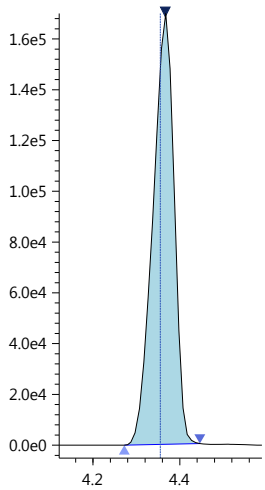
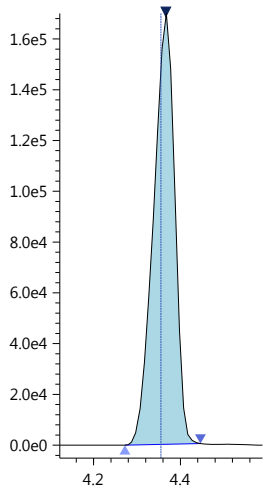
PFHpA-13C
Conc 5.1733
RT 4.368 Area 4042467
Q 366.90>322.10 (-) 1.22e6



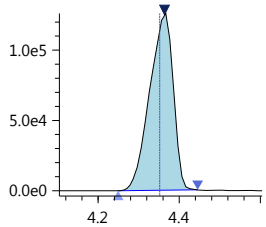
PFHxS-18O_IS
Conc 5.0000
RT 4.367 Area 577493
ISTD 402.70>84.05 (-) 1.70e5



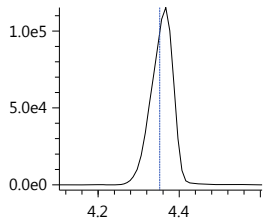
PFHxS-18O
Conc 4.7947
RT 4.367 Area 577493
Q 402.70>84.05 (-) 1.70e5



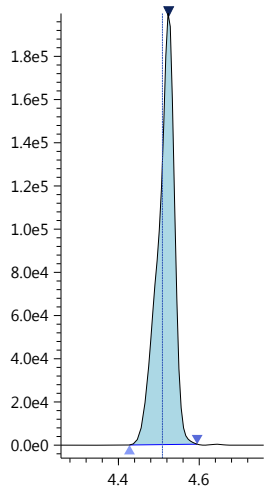
PFHxS_1
Conc 4.5553
RT 4.364 Area 506873
R#1 91.30 (0.00)
Q 399.00>80.00 (-) 1.26e5



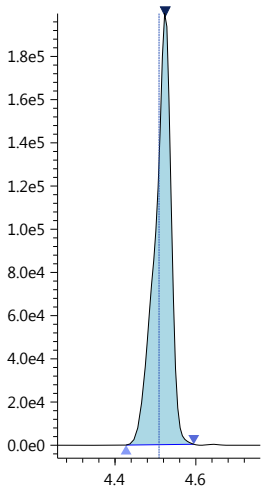
R1 399.00>99.00 (-) 1.15e5



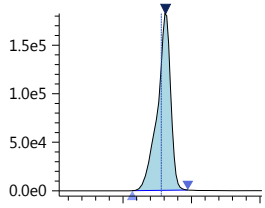
6_2-FTS-13C
Conc 5.1173
RT 4.524 Area 554530
Q 428.90>409.00 (-) 2.00e5



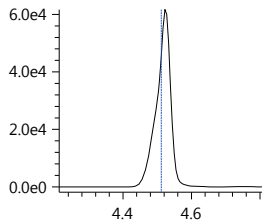
6_2-FTS-13C_IS
Conc 5.0000
RT 4.524 Area 554530
ISTD 428.90>409.00 (-) 2.00e5



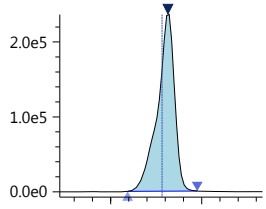
6_2-FTS_1
Conc 4.7733
RT 4.525 Area 489105
R#1 33.68 (0.00)
Q 427.00>407.00 (-) 1.83e5



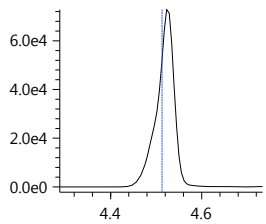
R1 427.00>80.90 (-) 6.17e4



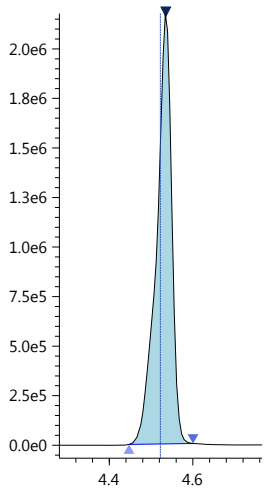
PFHpS_1
Conc 5.2675
RT 4.526 Area 613157
R#1 31.04 (0.00)
Q 449.00>80.15 (-) 2.37e5



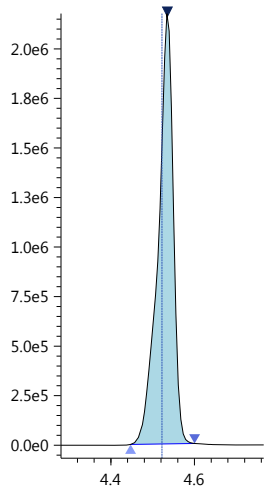
R1 449.00>99.20 (-) 7.28e4



PFOA-13C_IS
Conc 5.0000
RT 4.535 Area 5437719
ISTD 416.80>372.05 (-) 2.18e6



PFOA-13C
Conc 5.2206
RT 4.535 Area 5437719
Q 416.80>372.05 (-) 2.18e6



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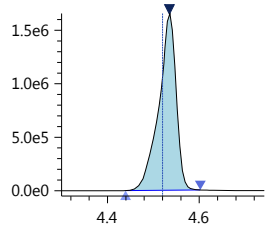
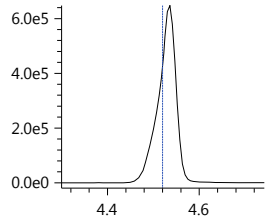
PFOA

Conc 4.8453
RT 4.535 Area 4320010
R#1 39.05 (0.00)

Q 413.00>369.00 (-) 1.66e6



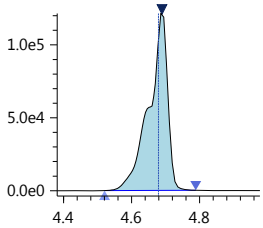
R1 413.00>169.10 (-) 6.48e5



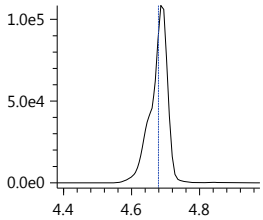
PFOS_1

Conc 4.5867
RT 4.689 Area 462171
R#1 89.27 (0.00)

Q 499.00>80.00 (-) 1.22e5



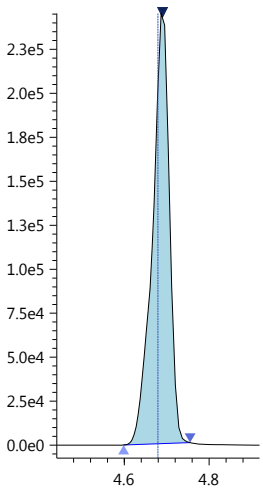
R1 499.00>99.00 (-) 1.08e5



PFOS-13C_IS

Conc 5.0000
RT 4.690 Area 683242

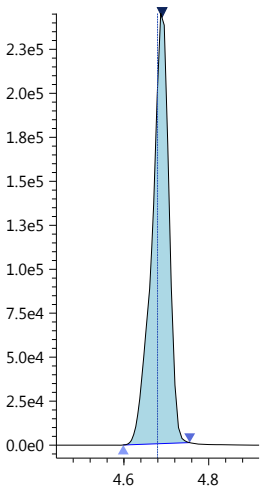
ISTD 502.80>80.05 (-) 2.45e5



PFOS-13C

Conc 5.4352
RT 4.690 Area 683242

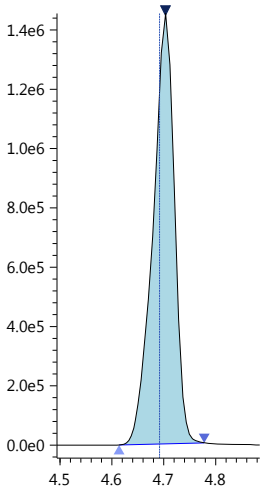
Q 502.80>80.05 (-) 2.45e5



PFNA-13C_IS

Conc 5.0000
RT 4.703 Area 4171893

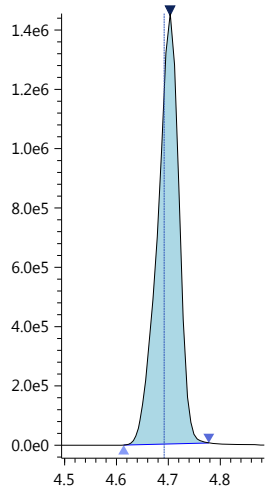
ISTD 467.80>423.00 (-) 1.46e6



PFNA-13C

Conc 4.8137
RT 4.703 Area 4171893

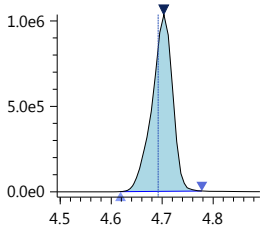
Q 467.80>423.00 (-) 1.46e6



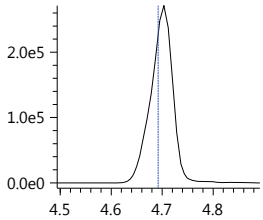
PFNA

Conc 5.1997
RT 4.703 Area 2888183
R#1 26.14 (0.00)

Q 463.00>418.90 (-) 1.04e6



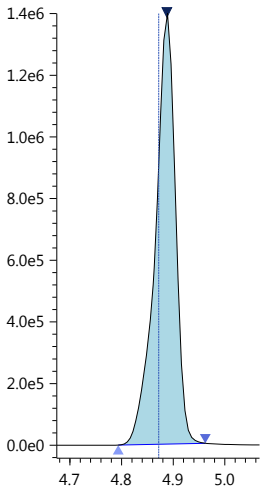
R1 463.00>219.00 (-) 2.71e5



PFDA-13C_IS

Conc 5.0000
RT 4.888 Area 3799828

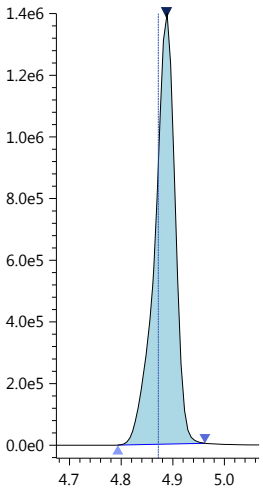
ISTD 514.80>469.95 (-) 1.40e6



PFDA-13C

Conc 5.0223
RT 4.888 Area 3799828

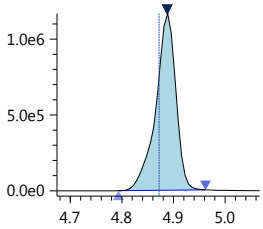
Q 514.80>469.95 (-) 1.40e6



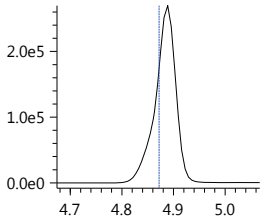
PFDA

Conc 4.9328
RT 4.888 Area 3138210
R#1 23.14 (0.00)

Q 513.00>468.80 (-) 1.17e6



R1 513.00>219.10 (-) 2.70e5



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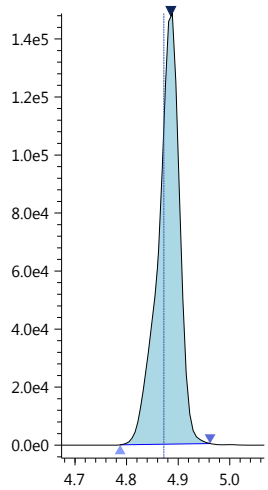
8_2-FTS-13C_IS

Conc 5.0000
RT 4.886 Area 426119

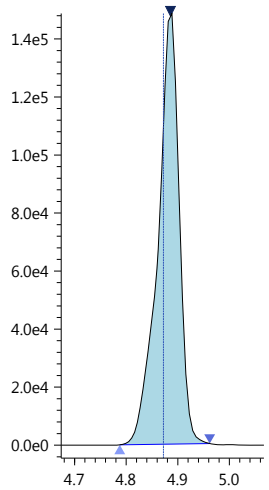
ISTD 528.80>509.00 (-) 1.49e5



8_2-FTS-13C

Conc 5.0564
RT 4.886 Area 426119

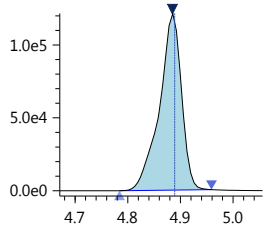
Q 528.80>509.00 (-) 1.49e5



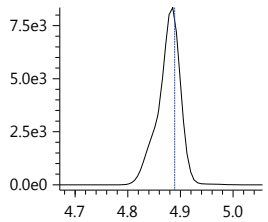
8_2-FTS_1

Conc 4.6796
RT 4.885 Area 351512
R#1 6.88 (0.00)

Q 527.10>506.90 (-) 1.22e5



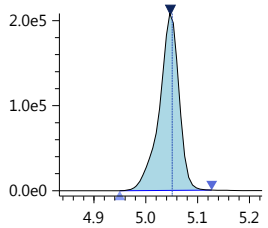
R1 527.20>487.00 (-) 8.35e3



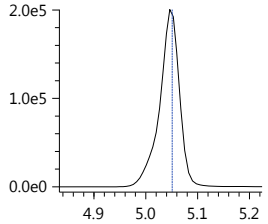
PFDS_1

Conc 4.3790
RT 5.048 Area 550111
R#1 96.11 (0.00)

Q 599.00>79.90 (-) 2.08e5



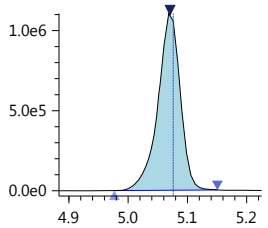
R1 599.00>99.10 (-) 2.00e5



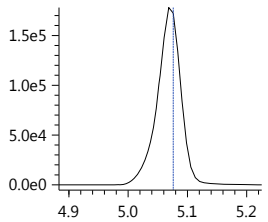
PFUnA

Conc 5.0244
RT 5.071 Area 2889999
R#1 16.06 (0.00)

Q 563.00>518.90 (-) 1.11e6



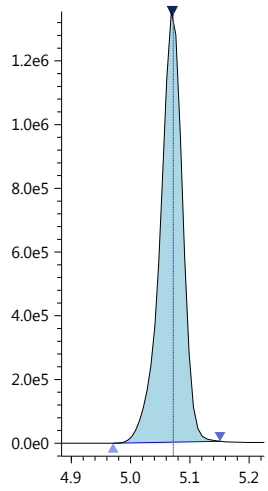
R1 563.00>219.00 (-) 1.78e5



PFUnA-13C_IS

Conc 5.0000
RT 5.070 Area 3559602

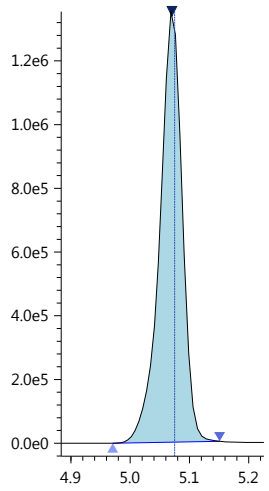
ISTD 564.80>519.95 (-) 1.35e6



PFUnA-13C

Conc 5.0283
RT 5.070 Area 3559602

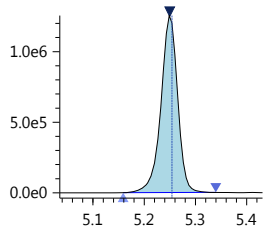
Q 564.80>519.95 (-) 1.35e6



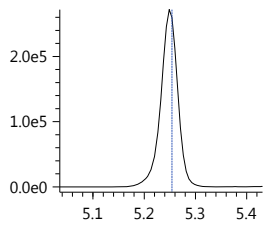
PFDoA

Conc 4.8984
RT 5.250 Area 2839321
R#1 21.63 (0.00)

Q 613.05>569.00 (-) 1.26e6



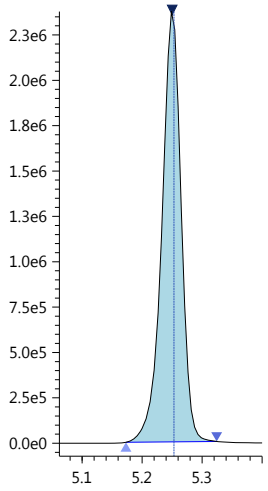
R1 613.05>169.00 (-) 2.72e5



PFDoA-13C

Conc 5.1634
RT 5.250 Area 5303651

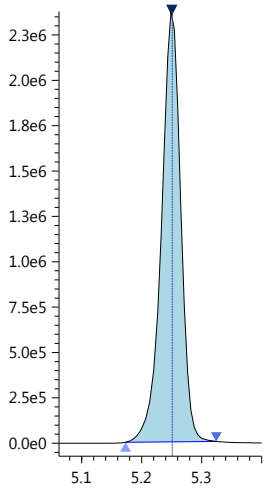
Q 614.80>569.95 (-) 2.38e6



PFDoA-13C_IS

Conc 5.0000
RT 5.250 Area 5303651

ISTD 614.80>569.95 (-) 2.38e6



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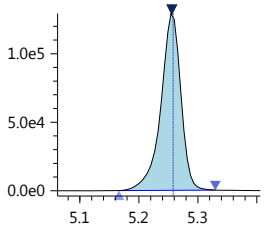
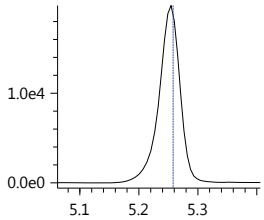
10_2-FtS_1

Conc 4.9910
RT 5.256 Area 304136
R#1 15.23 (0.00)

Q 627.00>606.95 (-) 1.29e5



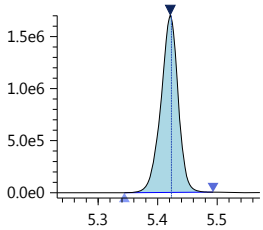
R1 627.00>81.25 (-) 1.98e4



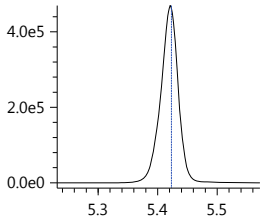
PFTrDA

Conc 5.1401
RT 5.421 Area 3431935
R#1 27.78 (0.00)

Q 663.00>618.90 (-) 1.70e6



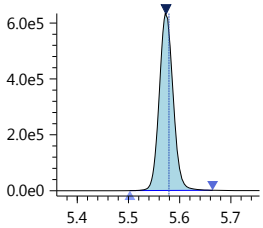
R1 662.90>169.00 (-) 4.70e5



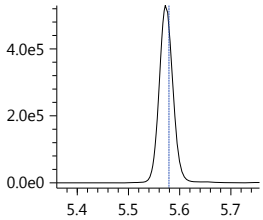
PFTeDA

Conc 5.0867
RT 5.573 Area 1189412
R#1 83.50 (0.00)

Q 713.40>669.00 (-) 6.34e5



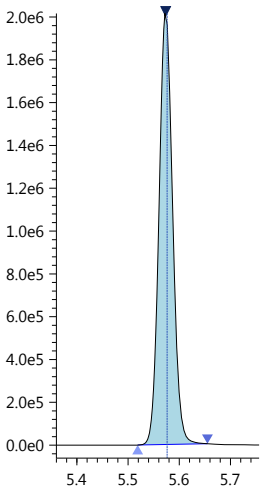
R1 713.40>169.10 (-) 5.29e5



PFTeDA-13C

Conc 5.0656
RT 5.573 Area 3723084

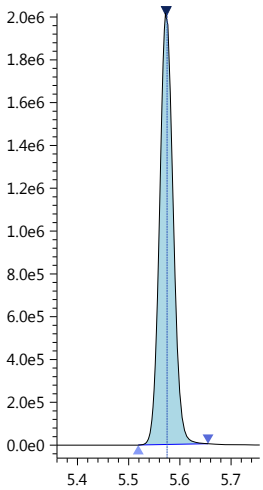
Q 714.70>669.90 (-) 2.02e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.573 Area 3723084

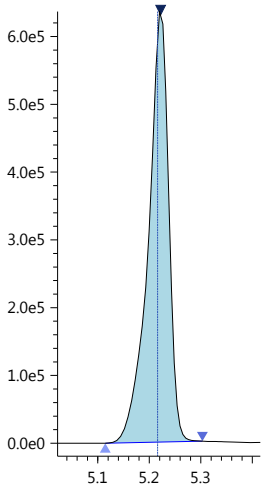
ISTD 714.70>669.90 (-) 2.02e6



FOSA-13C_IS

Conc 5.0000
RT 5.222 Area 1748050

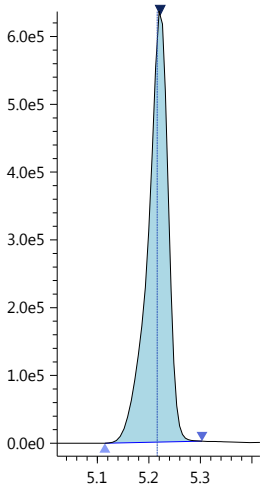
ISTD 506.00>78.05 (-) 6.37e5



FOSA-13C

Conc 5.2262
RT 5.222 Area 1748050

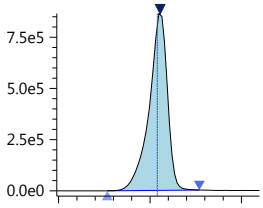
Q 506.00>78.05 (-) 6.37e5



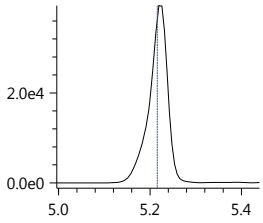
FOSA

Conc 5.1151
RT 5.222 Area 2388858
R#1 4.57 (0.00)

Q 498.20>78.00 (-) 8.66e5



R1 498.20>64.10 (-) 3.94e4

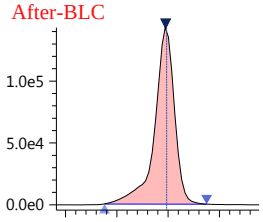


N-MeFOSAA

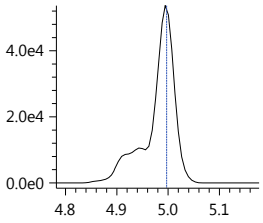
Conc 5.1245
RT 4.995 Area 380806
R#1 37.32 (0.00)

Q 570.20>419.00 (-) 1.43e5

After-BLC



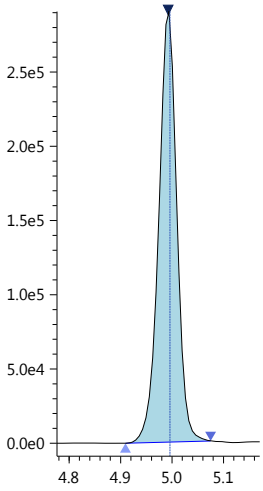
R1 570.20>512.00 (-) 5.37e4



N-MeFOSAA-d3

Conc 5.3550
RT 4.992 Area 708886

Q 572.80>419.05 (-) 2.91e5



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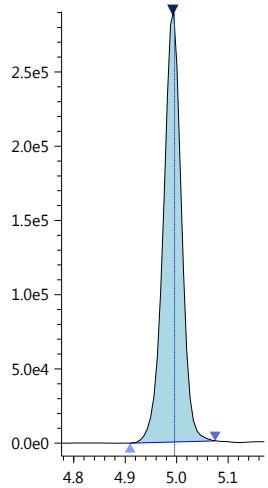
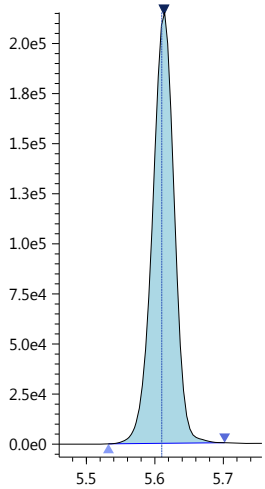
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.992 Area 708886

ISTD 572.80>419.05 (-) 2.91e5



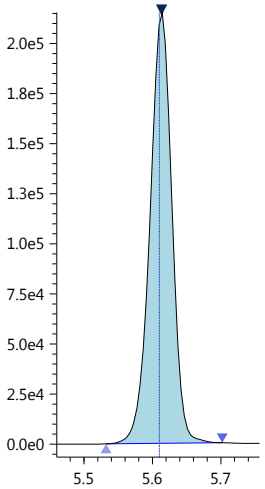
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.613 Area 479751

ISTD 514.90>168.90 (-) 2.15e5



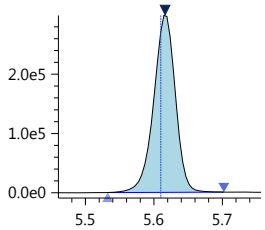
N-MeFOSA-d3
Conc 5.0405
RT 5.613 Area 479751

Q 514.90>168.90 (-) 2.15e5

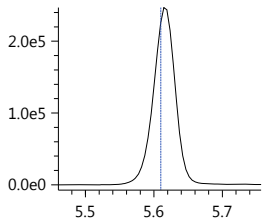


N-MeFOSA
Conc 5.2058
RT 5.616 Area 659500
R#1 82.22 (0.00)

Q 512.00>169.10 (-) 2.99e5

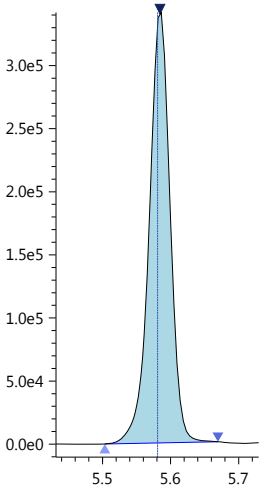


R1 512.00>219.00 (-) 2.47e5



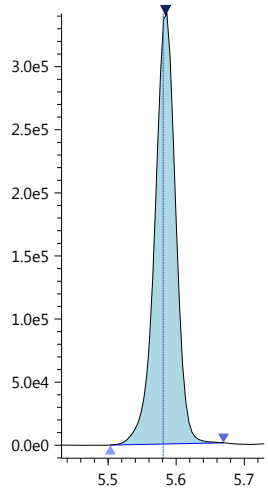
N-MeFOSE-d7
Conc 5.2730
RT 5.585 Area 729062

Q 622.70>59.10 (-) 3.42e5



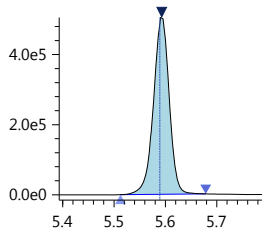
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.585 Area 729062

ISTD 622.70>59.10 (-) 3.42e5

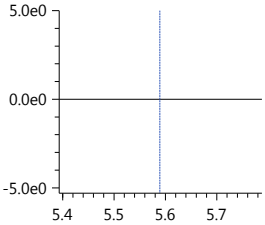


N-MeFOSE
Conc 5.0904
RT 5.593 Area 1078299
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 5.06e5

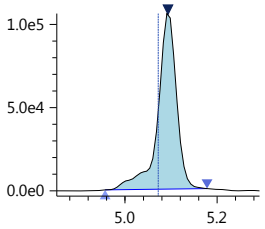


R1 556.00>121.20 (-) 0.00e0

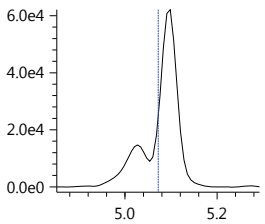


N-EtFOSAA
Conc 5.0386
RT 5.093 Area 300594
R#1 56.90 (0.00)

Q 584.20>418.95 (-) 1.07e5

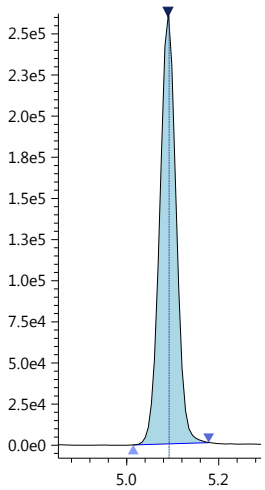


R1 584.20>526.10 (-) 6.21e4



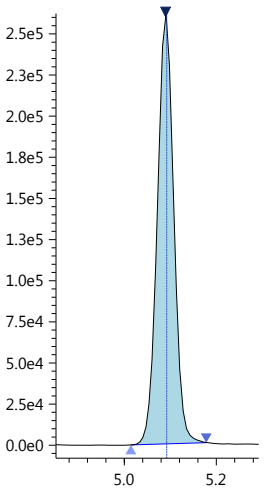
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.090 Area 650424

ISTD 588.80>419.00 (-) 2.62e5



N-EtFOSAA-d5
Conc 5.1178
RT 5.090 Area 650424

Q 588.80>419.00 (-) 2.62e5



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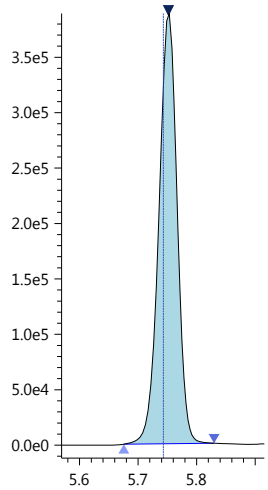
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.752 Area 844270

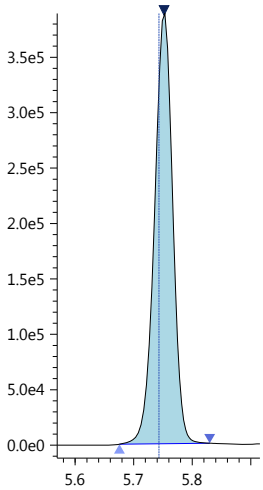
ISTD 530.90>169.15 (-) 3.89e5



N-EtFOSA-d9

Conc 5.2900
RT 5.752 Area 844270

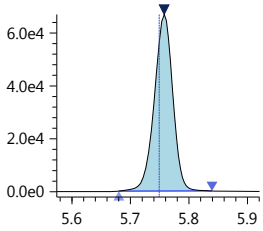
Q 530.90>169.15 (-) 3.89e5



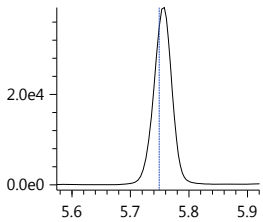
N-EtFOSA

Conc 4.8919
RT 5.758 Area 146388
R#1 59.32 (0.00)

Q 526.90>169.10 (-) 6.70e4



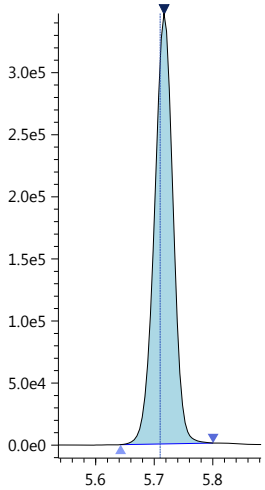
R1 526.90>219.00 (-) 3.92e4



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.717 Area 771517

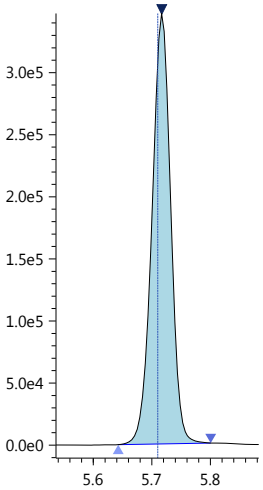
ISTD 638.70>59.10 (-) 3.48e5



N-EtFOSE-d9

Conc 5.1704
RT 5.717 Area 771517

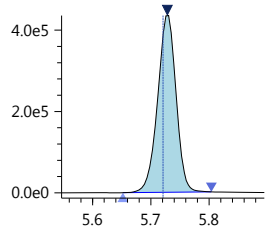
Q 638.70>59.10 (-) 3.48e5



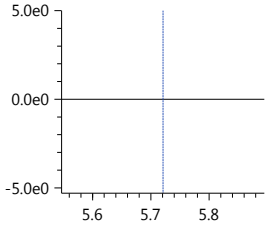
N-EtFOSE

Conc 5.1105
RT 5.728 Area 958989
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 4.36e5



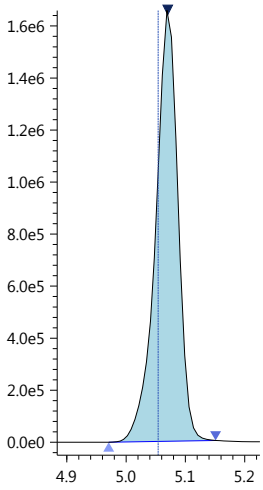
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.070 Area 4362512

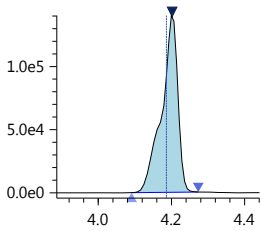
ISTD 570.00>525.00 (-) 1.66e6



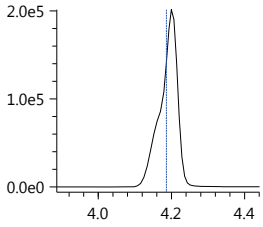
PFPeS

Conc 4.6937
RT 4.202 Area 429376
R#1 143.59 (0.00)

Q 349.00>99.00 (-) 1.40e5



R1 349.00>79.95 (-) 2.02e5



PFNS

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RT 4.869 Area 410920
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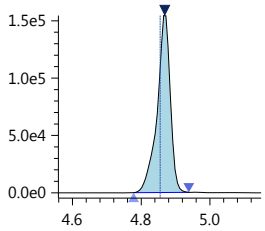
Q 549.00>99.00 (-) 1.55e5



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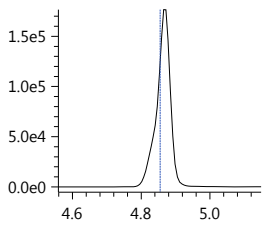

Insight Report

Printed at 1/7/2019 10:13:37 AM

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Date acquired: 1/4/2019 5:48:01 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_020.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
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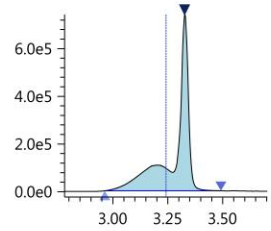
ISTD 216.90>172.15 (-) 7.43e5



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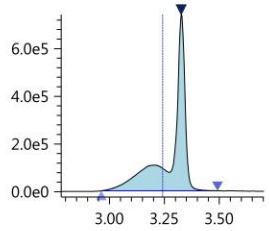

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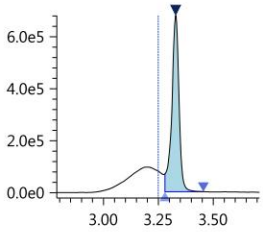
RT 3.329 Area 1551891
Q 213.00>169.10 (-) 6.82e5



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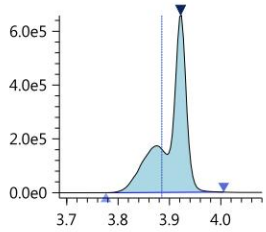
RT 3.922 Area 1647861
ISTD 267.90>223.00 (-) 6.59e5



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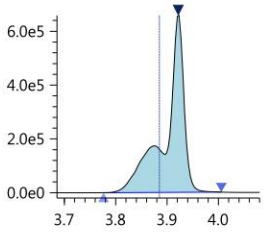

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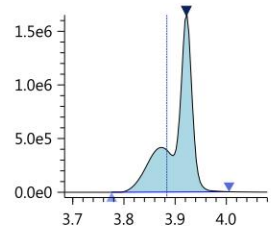

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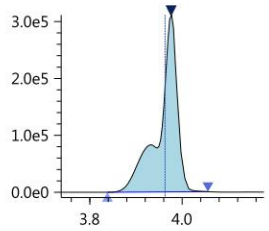
Conc 4.6273
RT 3.976 Area 849476
Q 299.00>80.00 (-) 3.12e5



PFBS-13C
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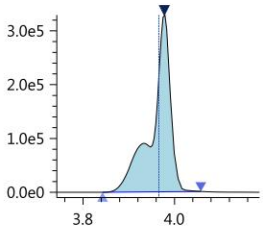
RT 3.978 Area 912546
Q 301.80>80.00 (-) 3.29e5



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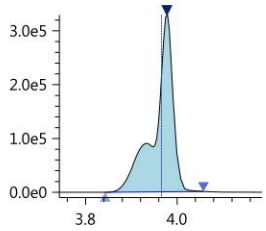

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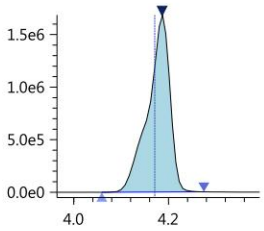

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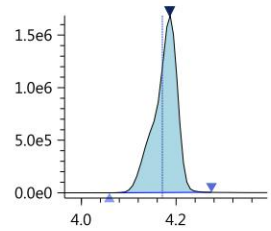

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Conc 5.0156
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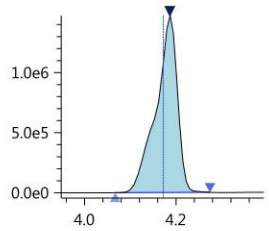
Q 313.00>269.00 (-) 1.48e6



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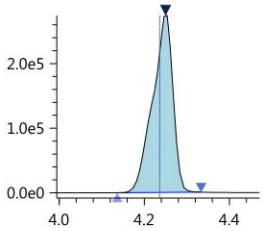
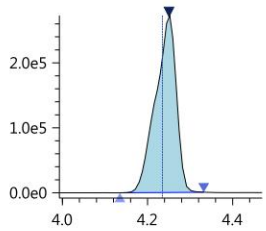
Conc 5.4380
RT 4.250 Area 914010
Q 329.00>169.00 (-) 2.74e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.250 Area 922804
ISTD 332.00>286.80 (-) 2.73e5



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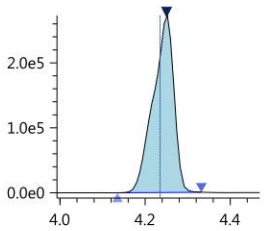
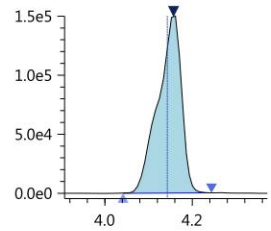


4_2-FTS-13C_IS
Conc 5.0000
RT 4.157 Area 558015
ISTD 328.80>309.05 (-) 1.50e5



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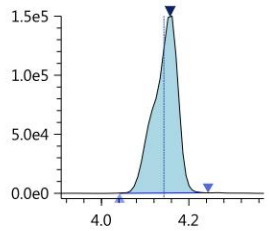

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Conc 4.7969
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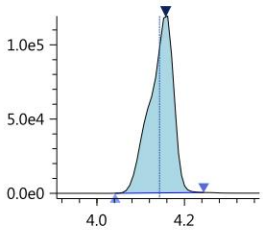
Q 327.00>307.05 (-) 1.19e5



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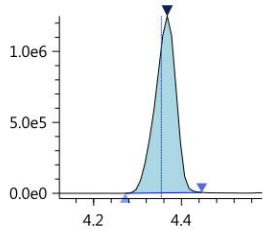

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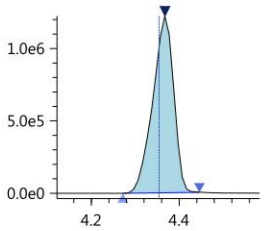

Insight Report

Printed at 1/7/2019 10:13:37 AM

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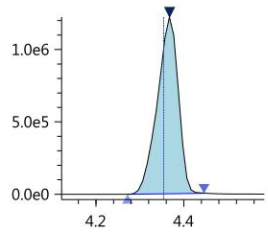
Q 366.90>322.10 (-) 1.22e6



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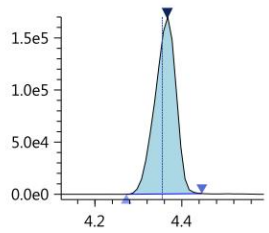

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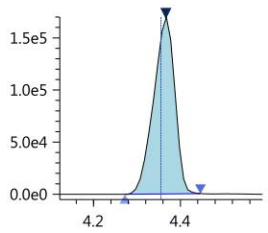

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Conc 4.7004
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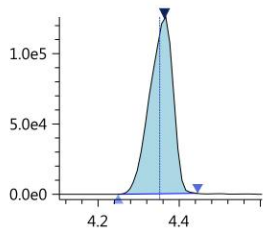
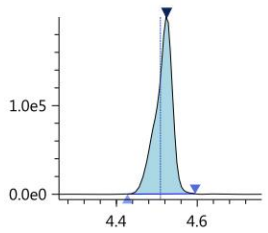
Q 399.00>80.00 (-) 1.26e5



6_2-FTS-13C
Conc 4.9669
RT 4.524 Area 554530
Q 428.90>409.00 (-) 2.00e5



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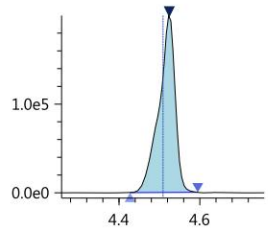
ISTD 428.90>409.00 (-) 2.00e5



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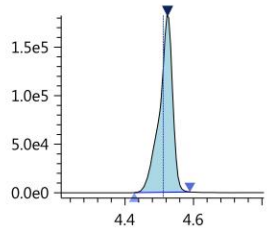

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RT 4.526 Area 613157
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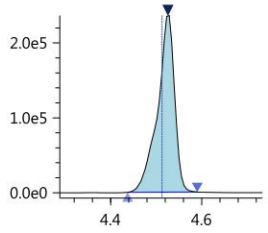

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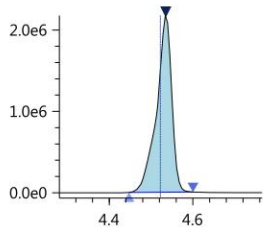

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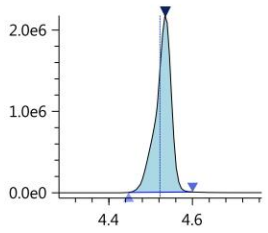

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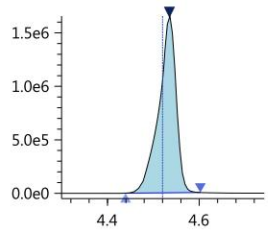

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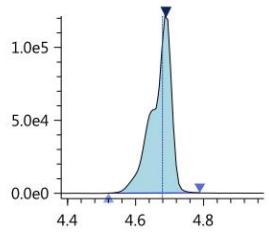
Q 499.00>80.00 (-) 1.22e5



PFOS-13C_IS
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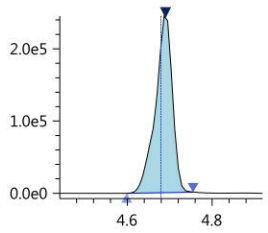
ISTD 502.80>80.05 (-) 2.45e5



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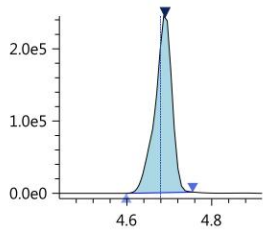

PFNA-13C_IS
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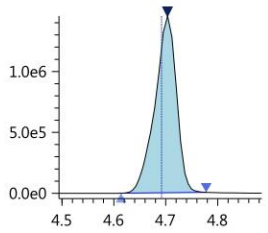
ISTD 467.80>423.00 (-) 1.46e6



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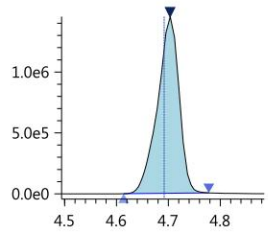
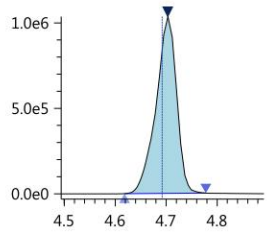
Q 467.80>423.00 (-) 1.46e6



PFNA
Conc 5.2921
RT 4.703 Area 2888183
Q 463.00>418.90 (-) 1.04e6



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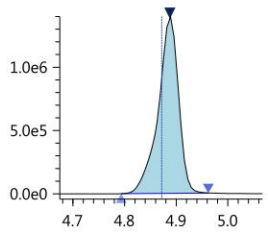
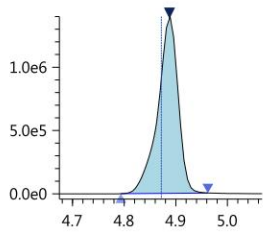


PFDA-13C
Conc 4.9985
RT 4.888 Area 3799828
Q 514.80>469.95 (-) 1.40e6



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RT 4.888 Area 3138210
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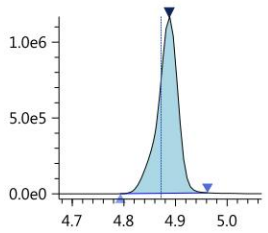
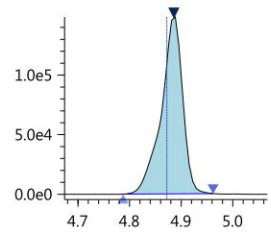


Insight Report

Printed at 1/7/2019 10:13:37 AM

8_2-FTS-13C_IS
Conc 5.0000
RT 4.886 Area 426119
ISTD 528.80>509.00 (-) 1.49e5



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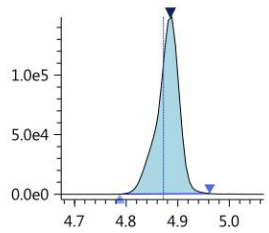

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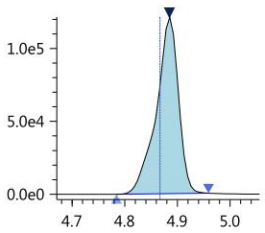

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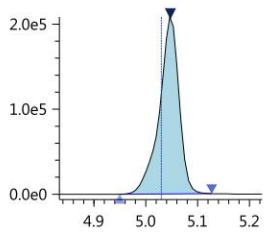

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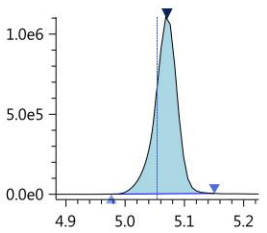

PFUnA-13C_IS
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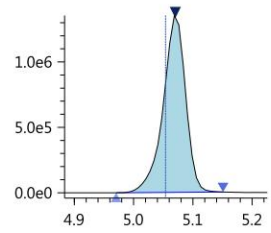
ISTD 564.80>519.95 (-) 1.35e6



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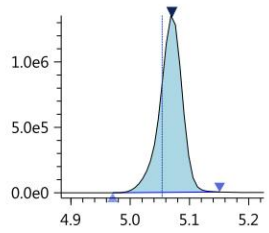

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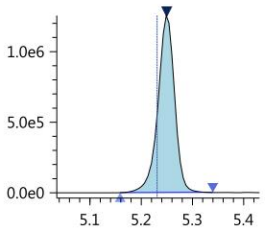

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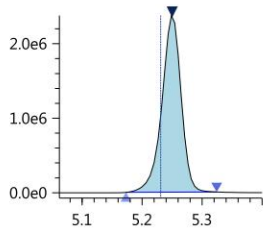
Q 614.80>569.95 (-) 2.38e6



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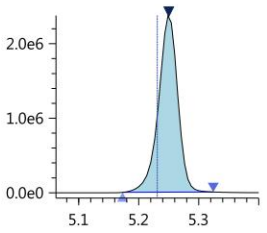

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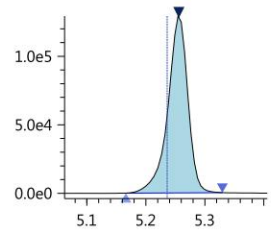

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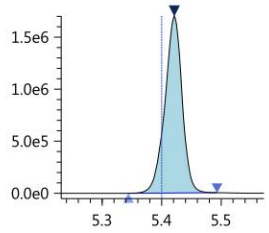

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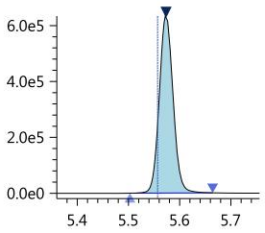
Q 713.40>669.00 (-) 6.34e5



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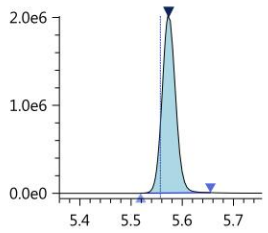
Q 714.70>669.90 (-) 2.02e6



PFTeDA-13C_IS
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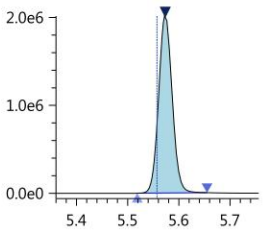

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RT 5.222 Area 1748050
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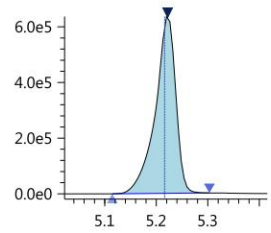

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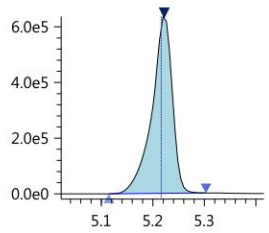

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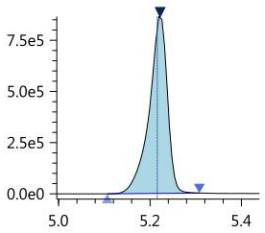
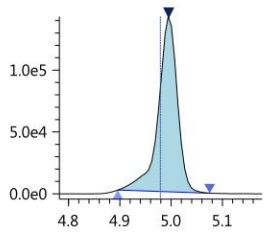


N-MeFOSAA
Conc 6.0113
RT 4.995 Area 366358
Q 570.20>419.00 (-) 1.43e5



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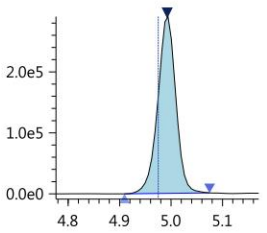
RT 4.992 Area 708886
Q 572.80>419.05 (-) 2.91e5



Insight Report

Printed at 1/7/2019 10:13:37 AM

N-MeFOSAA-d3_IS
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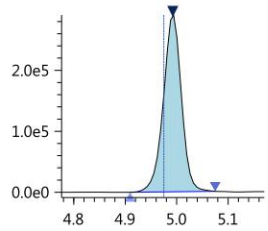
RT 4.992 Area 708886
ISTD 572.80>419.05 (-) 2.91e5



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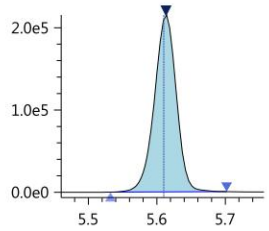

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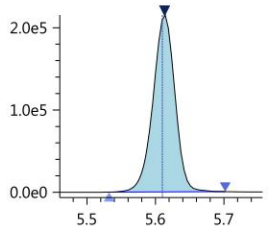

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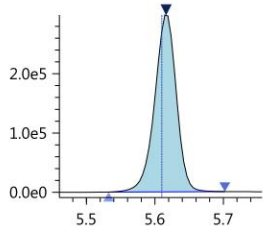

N-MeFOSE-d7
Conc 5.3307
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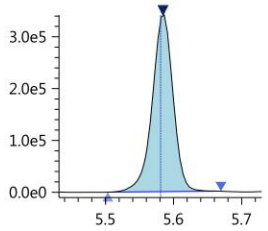
Q 622.70>59.10 (-) 3.42e5



N-MeFOSE-d7_IS
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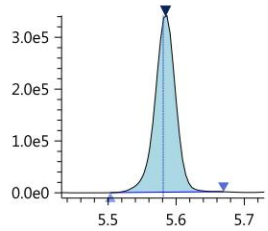
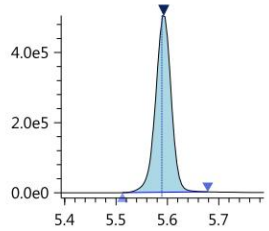


N-MeFOSE
Conc 5.1372
RT 5.593 Area 1078299
Q 616.00>59.00 (-) 5.06e5



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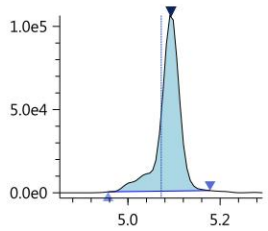
Conc 6.9456
RT 5.093 Area 300594
Q 584.20>418.95 (-) 1.07e5



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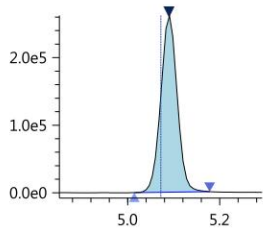

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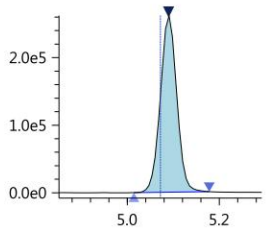

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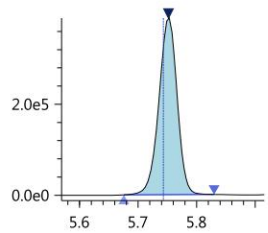

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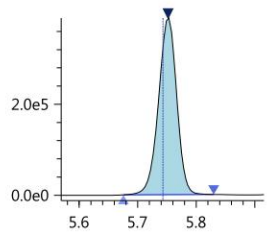

N-EtFOSA
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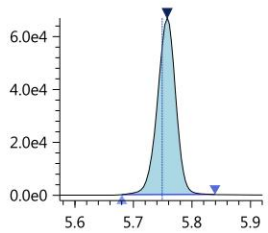
Q 526.90>169.10 (-) 6.70e4



N-EtFOSE-d9_IS
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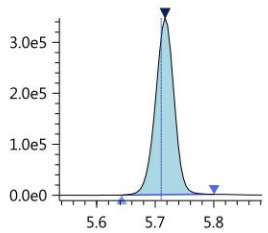
ISTD 638.70>59.10 (-) 3.48e5



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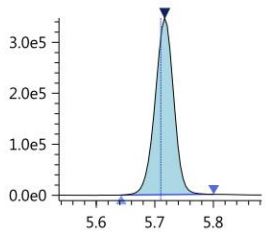

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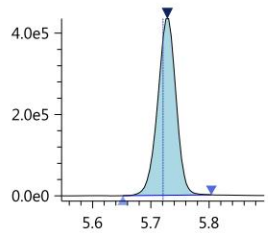
Q 630.00>58.90 (-) 4.36e5



13C7-PFUnDA_IS
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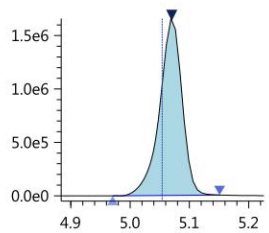
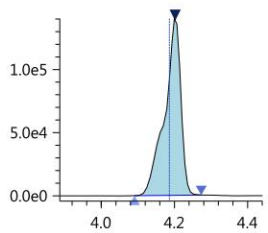
ISTD 570.00>525.00 (-) 1.66e6



PFPeS
Conc 4.9632
RT 4.202 Area 429376
Q 349.00>99.00 (-) 1.40e5



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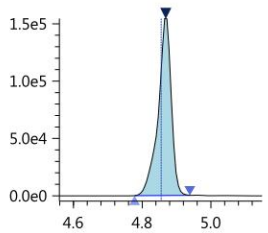
Q 549.00>99.00 (-) 1.55e5



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_021

Sample ID: 10.0 PPB ICAL
Date acquired: 1/4/2019 5:58:28 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_021.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.326	2873659	2873659	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.326	2873659	4366286	26	5.1291	ng/mL	5.0000
PFBA	M	3.328	5136079	2873659	2	10.1328	ng/mL	10.0000
PFPeA-13C_IS	Auto	3.924	1581035	1581035	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.924	1581035	4366286	26	5.0639	ng/mL	5.0000
PFPeA	Auto	3.924	7834779	1581035	4	10.0693	ng/mL	10.0000
PFBS_1	Auto	3.978	1682460	899847	16	9.1786	ng/mL	8.8737
PFBS-13C	Auto	3.979	899847	4366286	26	5.1498	ng/mL	5.0000
PFBS-13C_IS	Auto	3.979	899847	899847	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.189	5415232	5415232	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.189	5415232	4366286	26	5.1941	ng/mL	5.0000
PFHxA	Auto	4.188	9786943	5415232	6	10.2501	ng/mL	10.0000
HPFO_DA	Auto	4.253	1850719	1000135	3	9.9806	ng/mL	10.0000
HFPO_DA-13C_IS	Auto	4.253	1000135	1000135	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.253	1000135	4366286	26	5.3853	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.161	551430	551430	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.161	551430	4366286	26	5.1407	ng/mL	5.0000
4_2-FTS_1	Auto	4.160	822178	551430	5	8.6222	ng/mL	9.3722
PFHpA	Auto	4.369	8381282	3897871	8	10.0694	ng/mL	10.0000
PFHpA-13C_IS	Auto	4.368	3897871	3897871	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.368	3897871	4366286	26	4.9839	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.369	628103	628103	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.369	628103	4366286	26	5.2103	ng/mL	5.0000
PFHxS_1	Auto	4.365	1191874	628103	7	9.8484	ng/mL	9.1308
6_2-FTS-13C	Auto	4.527	499252	4366286	26	4.6032	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.527	499252	499252	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.527	850109	499252	10	9.2150	ng/mL	9.5117
PFHpS_1	Auto	4.529	1200510	628103	7	9.4823	ng/mL	9.5344
PFOA-13C_IS	Auto	4.538	4828862	4828862	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.538	4828862	4366286	26	4.6320	ng/mL	5.0000
PFOA	Auto	4.538	8453406	4828862	9	10.6776	ng/mL	10.0000
PFOS_1	Auto	4.691	864555	641725	13	9.1352	ng/mL	9.2923
PFOS-13C_IS	Auto	4.692	641725	641725	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.692	641725	4366286	26	5.1005	ng/mL	5.0000
PFNA-13C_IS	Auto	4.706	4438239	4438239	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.706	4438239	4366286	26	5.1166	ng/mL	5.0000
PFNA	Auto	4.706	5948131	4438239	11	10.0631	ng/mL	10.0000
PFDA-13C_IS	Auto	4.891	3784912	3784912	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.891	3784912	4366286	26	4.9983	ng/mL	5.0000
PFDA	Auto	4.891	6411804	3784912	12	10.1180	ng/mL	10.0000
8_2-FTS-13C_IS	Auto	4.888	390742	390742	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.888	390742	4366286	26	4.6326	ng/mL	5.0000
8_2-FTS_1	Auto	4.888	655077	390742	15	9.5104	ng/mL	9.6004
PFDS_1	Auto	5.050	1069043	641725	13	9.0603	ng/mL	9.6467
PFUnA	Auto	5.073	5575516	3500611	14	9.8570	ng/mL	10.0000
PFUnA-13C_IS	Auto	5.073	3500611	3500611	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.073	3500611	4366286	26	4.9407	ng/mL	5.0000
PFDoA	Auto	5.253	5442845	4901750	17	10.1495	ng/mL	10.0000
PFDoA-13C	Auto	5.253	4901750	4366286	26	4.7680	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.253	4901750	4901750	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.259	535541	390742	15	9.5843	ng/mL	9.6619
PFTrDA	Auto	5.425	6456012	3629124	22	9.9216	ng/mL	10.0000
PFTeDA	Auto	5.577	2258141	3629124	22	10.0127	ng/mL	10.0000
PFTeDA-13C	Auto	5.577	3629124	4366286	26	4.9335	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.577	3629124	3629124	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.225	1675483	1675483	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.225	1675483	4366286	26	5.0049	ng/mL	5.0000
FOSA	Auto	5.225	4655394	1675483	18	10.4001	ng/mL	10.0000
N-MeFOSAA	Auto	4.997	740308	684139	19	10.3226	ng/mL	10.0000
N-MeFOSAA-d3	Auto	4.994	684139	4366286	26	5.1636	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.994	684139	684139	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.618	493051	493051	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.618	493051	4366286	26	5.1757	ng/mL	5.0000
N-MeFOSA	Auto	5.621	1294920	493051	1	9.9458	ng/mL	10.0000
N-MeFOSE-d7	Auto	5.589	683903	4366286	26	4.9421	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.589	683903	683903	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.597	2075654	683903	20	10.4457	ng/mL	10.0000

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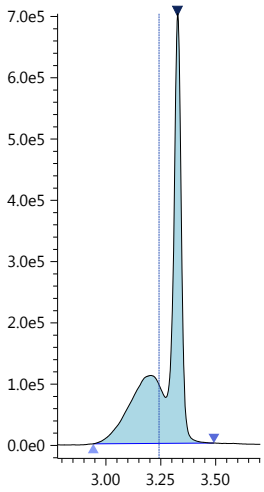
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.095	626542	663489	21	10.2652	ng/mL	10.0000
N-EtFOSAA-d5_IS	Auto	5.092	663489	663489	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.092	663489	4366286	26	5.2161	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.756	827430	827430	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.756	827430	4366286	26	5.1800	ng/mL	5.0000
N-EtFOSA	Auto	5.762	293448	827430	23	10.0058	ng/mL	10.0000
N-EtFOSE-d9_IS	Auto	5.721	771526	771526	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.721	771526	4366286	26	5.1659	ng/mL	5.0000
N-EtFOSE	Auto	5.732	1929598	771526	24	10.2828	ng/mL	10.0000
13C7-PFUnDA_IS	Auto	5.073	4366286	4366286	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.203	865341	899847	16	9.5928	ng/mL	9.4092
PFNS	Auto	4.871	771101	641725	13	9.4769	ng/mL	9.6158

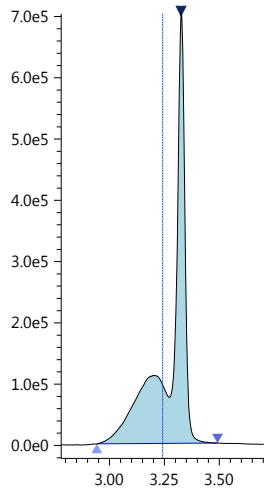
PFBA-13C_IS

Conc 5.0000
RT 3.326 Area 2873659
ISTD 216.90>172.15 (-) 7.05e5



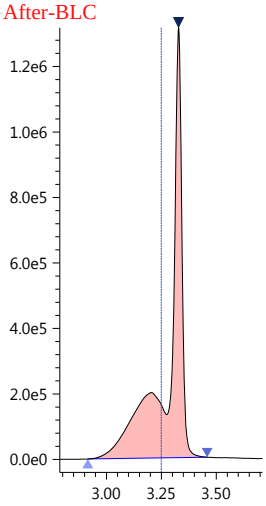
PFBA-13C

Conc 5.1291
RT 3.326 Area 2873659
Q 216.90>172.15 (-) 7.05e5



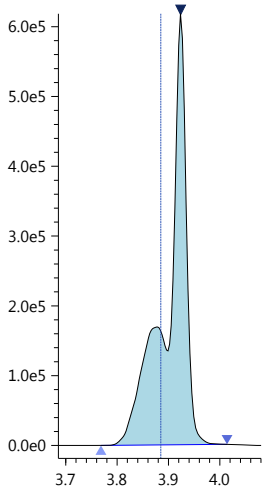
PFBA

Conc 10.1328
RT 3.328 Area 5136079
Q 213.00>169.10 (-) 1.32e6
After-BLC



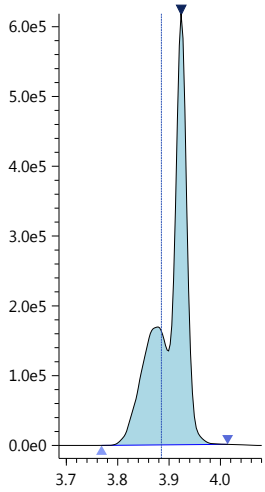
PFPeA-13C_IS

Conc 5.0000
RT 3.924 Area 1581035
ISTD 267.90>223.00 (-) 6.19e5



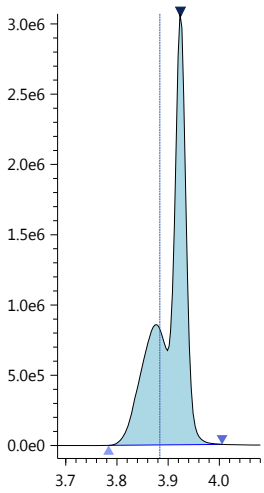
PFPeA-13C

Conc 5.0639
RT 3.924 Area 1581035
Q 267.90>223.00 (-) 6.19e5



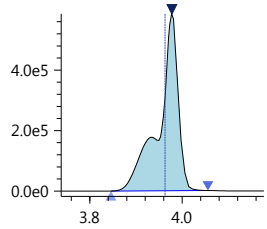
PFPeA

Conc 10.0693
RT 3.924 Area 7834779
Q 263.05>219.10 (-) 3.07e6

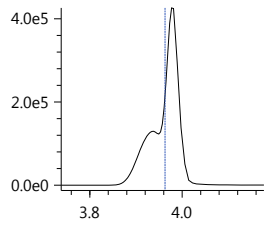


PFBS_1

Conc 9.1786
RT 3.978 Area 1682460
R#1 72.86 (0.00)
Q 299.00>80.00 (-) 5.86e5

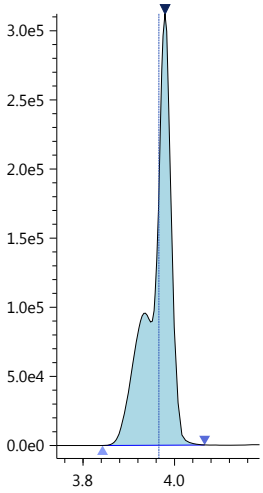


R1 298.80>99.00 (-) 4.26e5



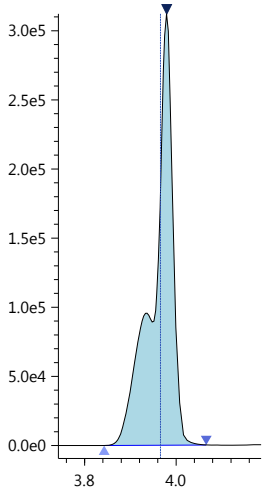
PFBS-13C

Conc 5.1498
RT 3.979 Area 899847
Q 301.80>80.00 (-) 3.12e5



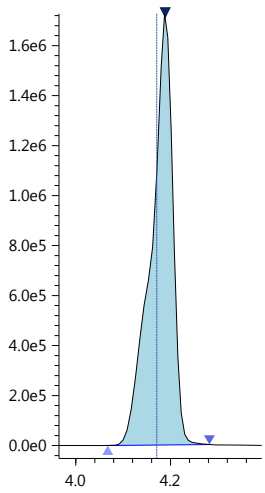
PFBS-13C_IS

Conc 5.0000
RT 3.979 Area 899847
ISTD 301.80>80.00 (-) 3.12e5



PFHxA-13C_IS

Conc 5.0000
RT 4.189 Area 5415232
ISTD 314.90>270.10 (-) 1.73e6



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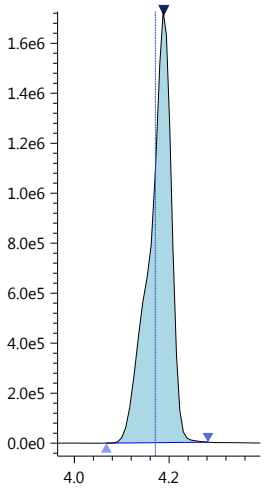
PFHxA-13C

Conc 5.1941
RT 4.189 Area 5415232

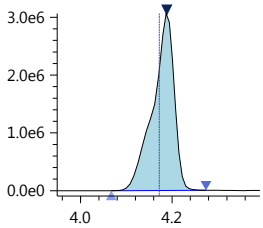
Q 314.90>270.10 (-) 1.73e6



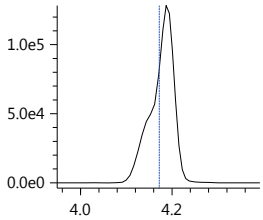
PFHxA

Conc 10.2501
RT 4.188 Area 9786943
R#1 4.18 (0.00)

Q 313.00>269.00 (-) 3.07e6



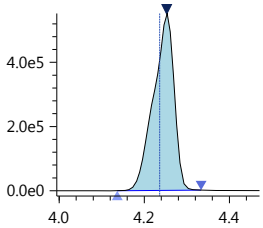
R1 313.00>119.10 (-) 1.28e5



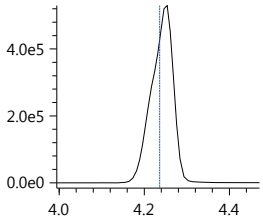
HPFO_DA

Conc 9.9806
RT 4.253 Area 1850719
R#1 95.95 (0.00)

Q 329.00>169.00 (-) 5.52e5



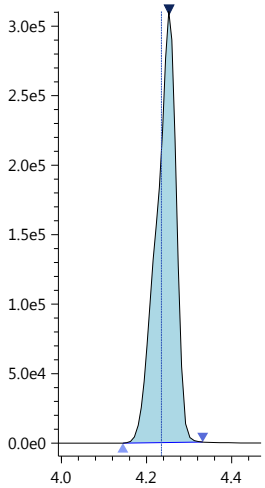
R1 329.00>285.10 (-) 5.30e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.253 Area 1000135

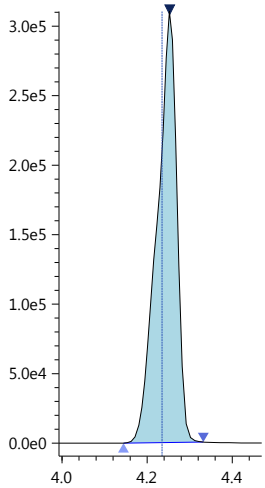
ISTD 332.00>286.80 (-) 3.11e5



HFPO_DA-13C

Conc 5.3853
RT 4.253 Area 1000135

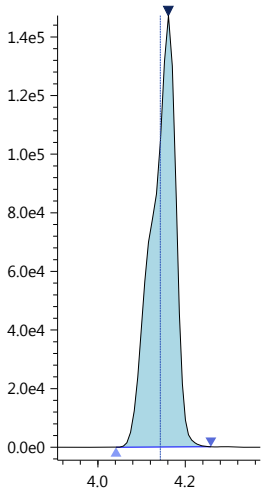
Q 332.00>286.80 (-) 3.11e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.161 Area 551430

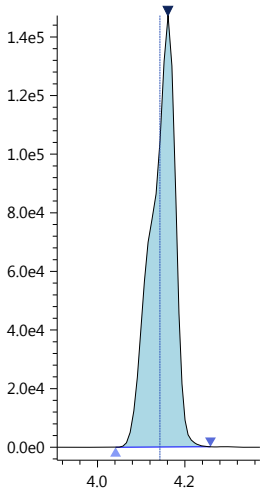
ISTD 328.80>309.05 (-) 1.47e5



4_2-FTS-13C

Conc 5.1407
RT 4.161 Area 551430

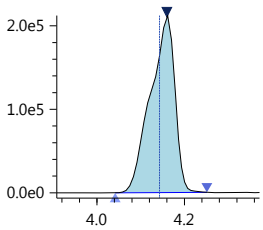
Q 328.80>309.05 (-) 1.47e5



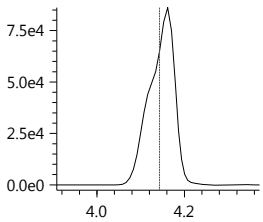
4_2-FTS_1

Conc 8.6222
RT 4.160 Area 822178
R#1 40.56 (0.00)

Q 327.00>307.05 (-) 2.12e5



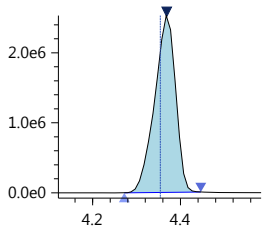
R1 327.00>81.10 (-) 8.61e4



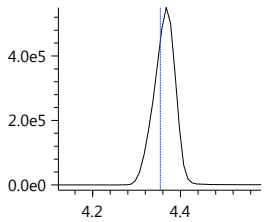
PFHpA

Conc 10.0694
RT 4.369 Area 8381282
R#1 21.77 (0.00)

Q 362.90>319.00 (-) 2.53e6



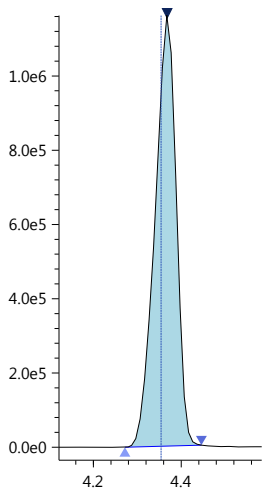
R1 362.90>169.00 (-) 5.50e5



PFHpA-13C_IS

Conc 5.0000
RT 4.368 Area 3897871

ISTD 366.90>322.10 (-) 1.16e6



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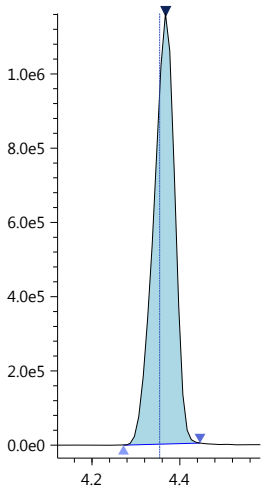
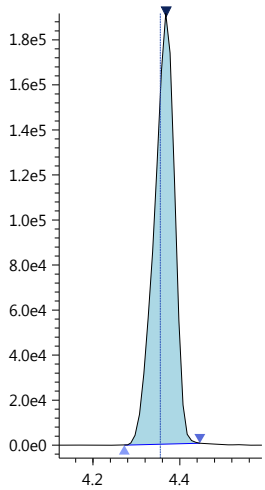
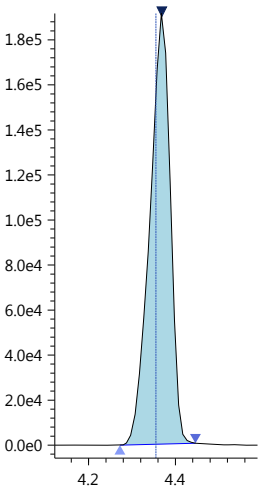
PFHpA-13C
Conc 4.9839
RT 4.368 Area 3897871
Q 366.90>322.10 (-) 1.16e6



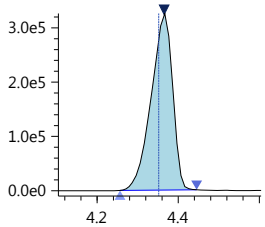
PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 628103
ISTD 402.70>84.05 (-) 1.92e5



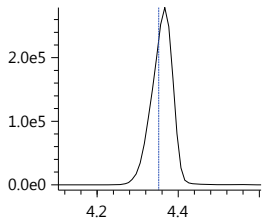
PFHxS-18O
Conc 5.2103
RT 4.369 Area 628103
Q 402.70>84.05 (-) 1.92e5



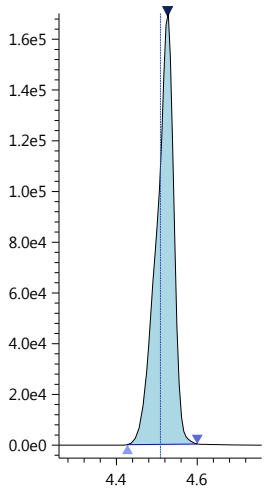
PFHxS_1
Conc 9.8484
RT 4.365 Area 1191874
R#1 85.42 (0.00)
Q 399.00>80.00 (-) 3.26e5



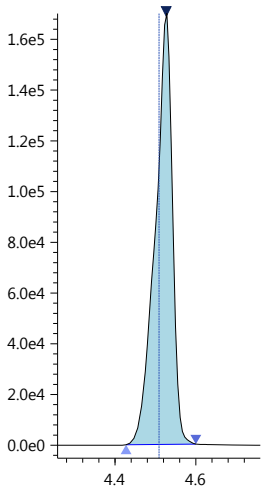
R1 399.00>99.00 (-) 2.79e5



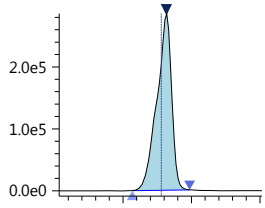
6_2-FTS-13C
Conc 4.6032
RT 4.527 Area 499252
Q 428.90>409.00 (-) 1.70e5



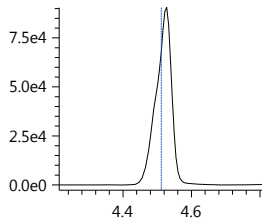
6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 499252
ISTD 428.90>409.00 (-) 1.70e5



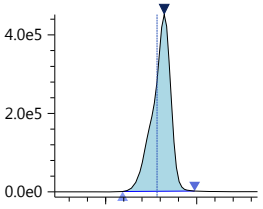
6_2-FTS_1
Conc 9.2150
RT 4.527 Area 850109
R#1 32.06 (0.00)
Q 427.00>407.00 (-) 2.86e5



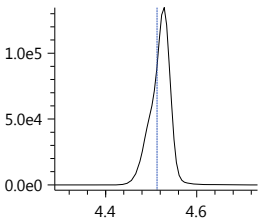
R1 427.00>80.90 (-) 9.05e4



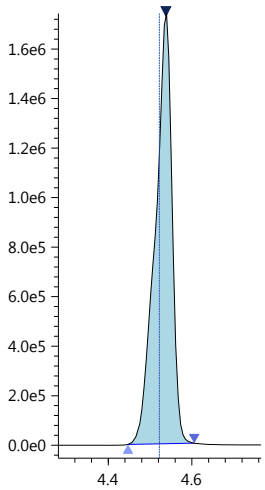
PFHpS_1
Conc 9.4823
RT 4.529 Area 1200510
R#1 29.77 (0.00)
Q 449.00>80.15 (-) 4.52e5



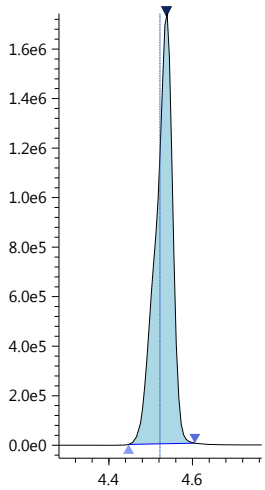
R1 449.00>99.20 (-) 1.35e5



PFOA-13C_IS
Conc 5.0000
RT 4.538 Area 4828862
ISTD 416.80>372.05 (-) 1.74e6



PFOA-13C
Conc 4.6320
RT 4.538 Area 4828862
Q 416.80>372.05 (-) 1.74e6



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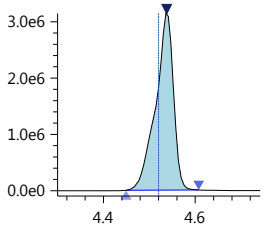
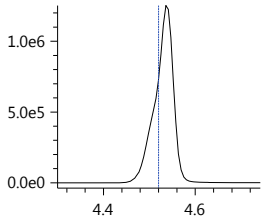
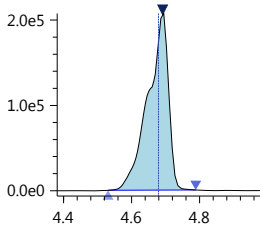
PFOA
Conc 10.6776
RT 4.538 Area 8453406
R#1 39.60 (0.00)
Q 413.00>369.00 (-) 3.15e6



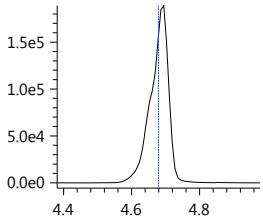
R1 413.00>169.10 (-) 1.25e6



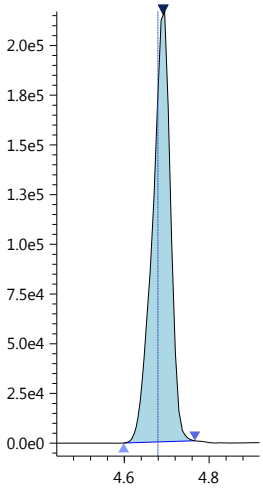
PFOS_1
Conc 9.1352
RT 4.691 Area 864555
R#1 91.03 (0.00)
Q 499.00>80.00 (-) 2.08e5



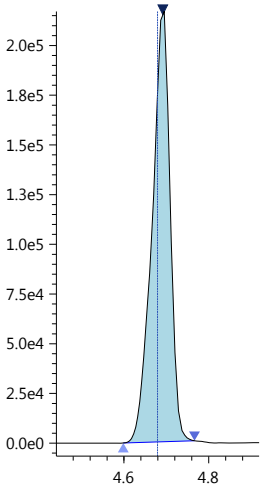
R1 499.00>99.00 (-) 1.89e5



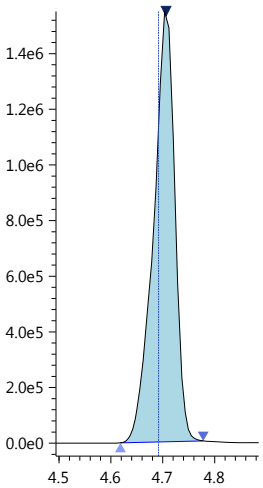
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 641725
ISTD 502.80>80.05 (-) 2.17e5



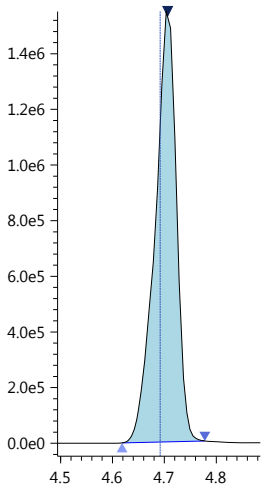
PFOS-13C
Conc 5.1005
RT 4.692 Area 641725
Q 502.80>80.05 (-) 2.17e5



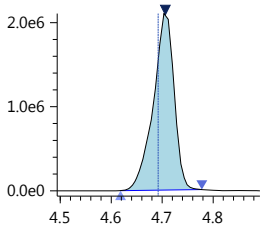
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4438239
ISTD 467.80>423.00 (-) 1.55e6



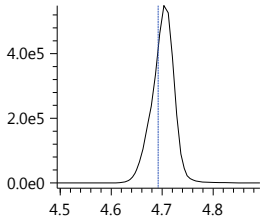
PFNA-13C
Conc 5.1166
RT 4.706 Area 4438239
Q 467.80>423.00 (-) 1.55e6



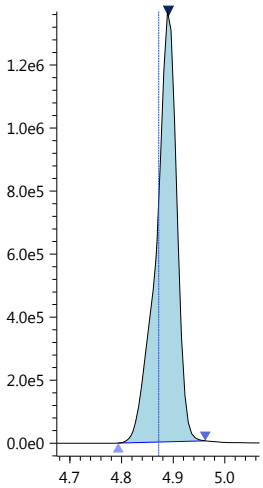
PFNA
Conc 10.0631
RT 4.706 Area 5948131
R#1 26.11 (0.00)
Q 463.00>418.90 (-) 2.11e6



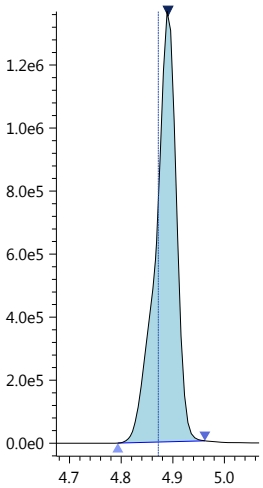
R1 463.00>219.00 (-) 5.49e5



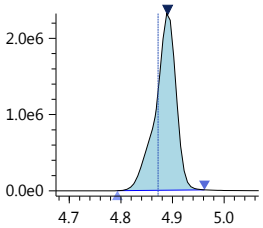
PFDA-13C_IS
Conc 5.0000
RT 4.891 Area 3784912
ISTD 514.80>469.95 (-) 1.37e6



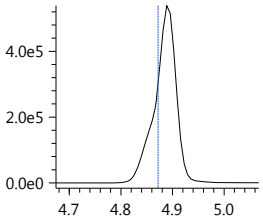
PFDA-13C
Conc 4.9983
RT 4.891 Area 3784912
Q 514.80>469.95 (-) 1.37e6



PFDA
Conc 10.1180
RT 4.891 Area 6411804
R#1 23.20 (0.00)
Q 513.00>468.80 (-) 2.33e6



R1 513.00>219.10 (-) 5.39e5



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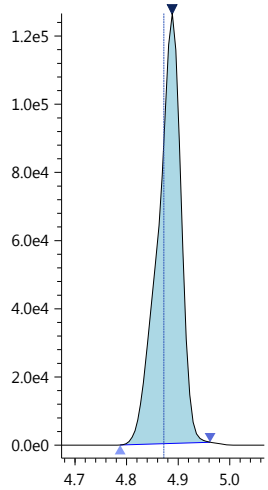
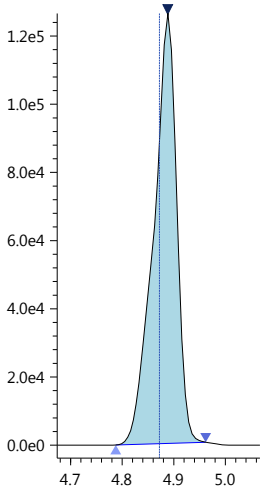
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 390742

ISTD 528.80>509.00 (-) 1.27e5



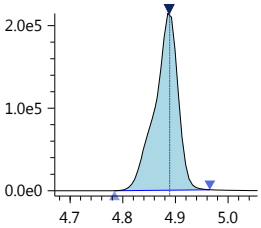
8_2-FTS-13C
Conc 4.6326
RT 4.888 Area 390742

Q 528.80>509.00 (-) 1.27e5

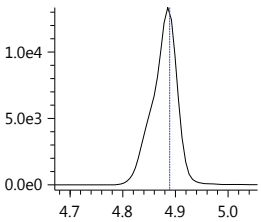


8_2-FTS_1
Conc 9.5104
RT 4.888 Area 655077
R#1 6.23 (0.00)

Q 527.10>506.90 (-) 2.15e5

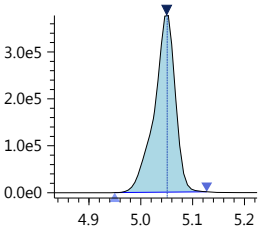


R1 527.20>487.00 (-) 1.33e4

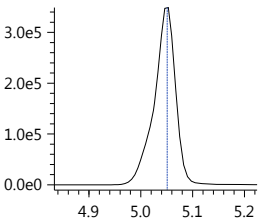


PFDS_1
Conc 9.0603
RT 5.050 Area 1069043
R#1 92.53 (0.00)

Q 599.00>79.90 (-) 3.78e5

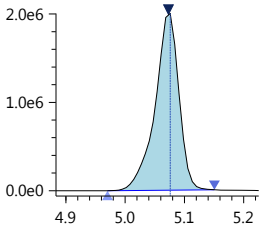


R1 599.00>99.10 (-) 3.49e5

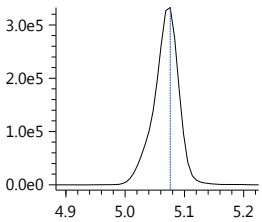


PFUnA
Conc 9.8570
RT 5.073 Area 5575516
R#1 16.70 (0.00)

Q 563.00>518.90 (-) 2.01e6

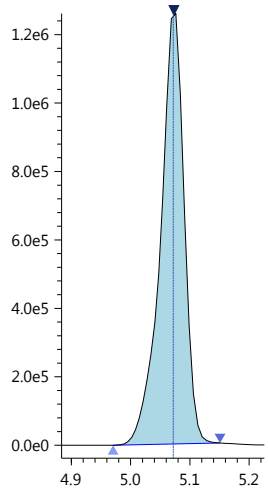


R1 563.00>219.00 (-) 3.33e5



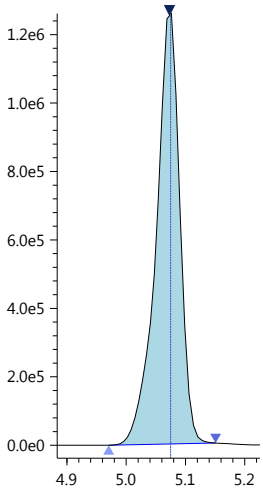
PFUnA-13C_IS
Conc 5.0000
RT 5.073 Area 3500611

ISTD 564.80>519.95 (-) 1.26e6



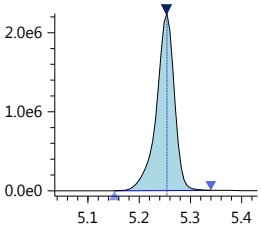
PFUnA-13C
Conc 4.9407
RT 5.073 Area 3500611

Q 564.80>519.95 (-) 1.26e6

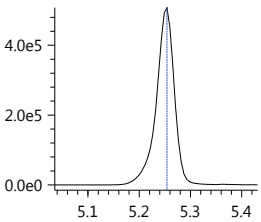


PFDoA
Conc 10.1495
RT 5.253 Area 5442845
R#1 23.11 (0.00)

Q 613.05>569.00 (-) 2.24e6

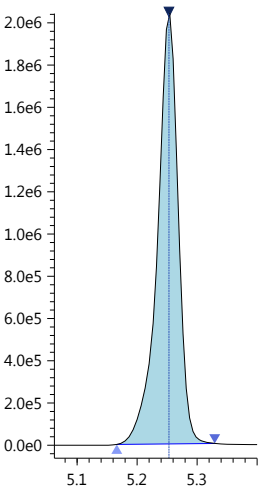


R1 613.05>169.00 (-) 5.08e5



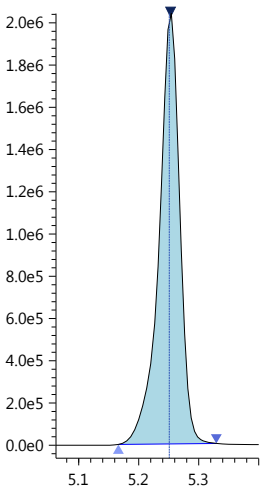
PFDoA-13C
Conc 4.7680
RT 5.253 Area 4901750

Q 614.80>569.95 (-) 2.04e6



PFDoA-13C_IS
Conc 5.0000
RT 5.253 Area 4901750

ISTD 614.80>569.95 (-) 2.04e6



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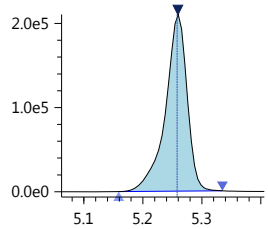
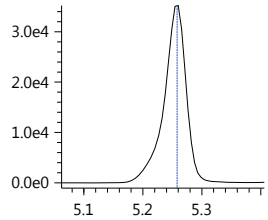
10_2-FtS_1

Conc 9.5843
RT 5.259 Area 535541
R#1 16.74 (0.00)

Q 627.00>606.95 (-) 2.11e5



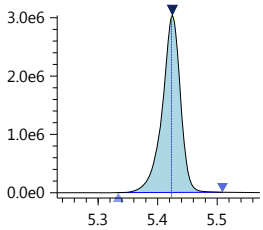
R1 627.00>81.25 (-) 3.52e4



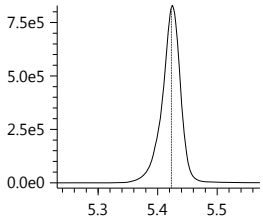
PFTrDA

Conc 9.9216
RT 5.425 Area 6456012
R#1 26.92 (0.00)

Q 663.00>618.90 (-) 3.04e6



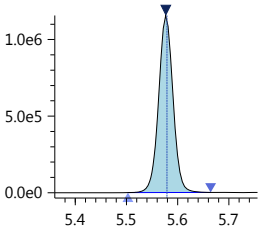
R1 662.90>169.00 (-) 8.29e5



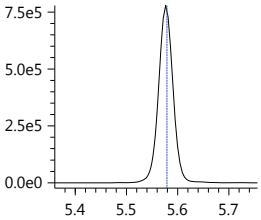
PFTeDA

Conc 10.0127
RT 5.577 Area 2258141
R#1 67.35 (0.00)

Q 713.40>669.00 (-) 1.16e6



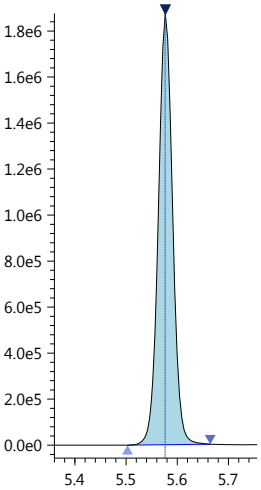
R1 713.40>169.10 (-) 7.79e5



PFTeDA-13C

Conc 4.9335
RT 5.577 Area 3629124

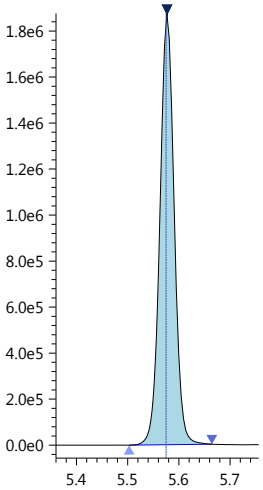
Q 714.70>669.90 (-) 1.88e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.577 Area 3629124

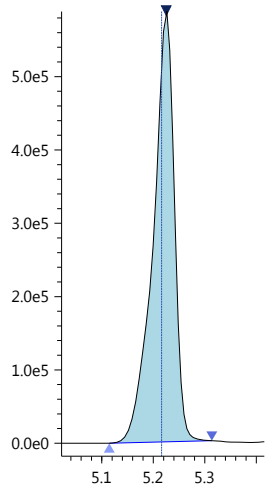
ISTD 714.70>669.90 (-) 1.88e6



FOSA-13C_IS

Conc 5.0000
RT 5.225 Area 1675483

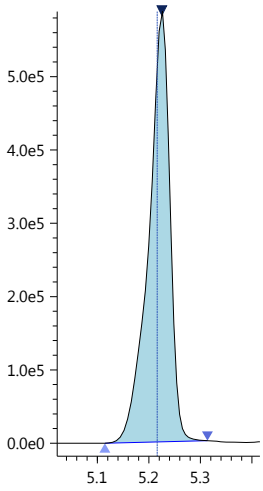
ISTD 506.00>78.05 (-) 5.89e5



FOSA-13C

Conc 5.0049
RT 5.225 Area 1675483

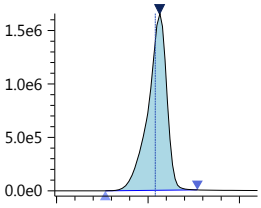
Q 506.00>78.05 (-) 5.89e5



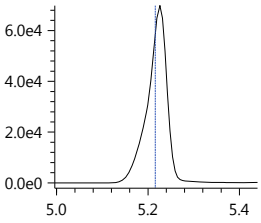
FOSA

Conc 10.4001
RT 5.225 Area 4655394
R#1 4.21 (0.00)

Q 498.20>78.00 (-) 1.66e6



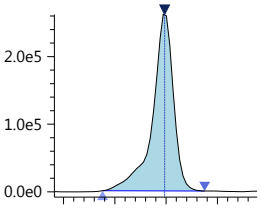
R1 498.20>64.10 (-) 6.98e4



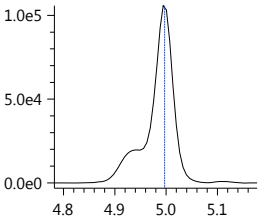
N-MeFOSAA

Conc 10.3226
RT 4.997 Area 740308
R#1 39.67 (0.00)

Q 570.20>419.00 (-) 2.62e5



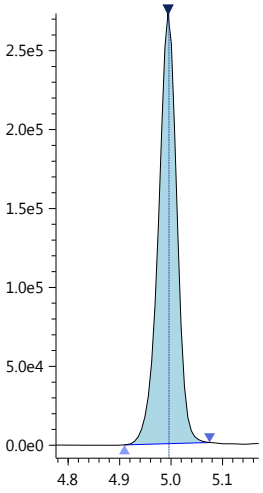
R1 570.20>512.00 (-) 1.06e5



N-MeFOSAA-d3

Conc 5.1636
RT 4.994 Area 684139

Q 572.80>419.05 (-) 2.74e5



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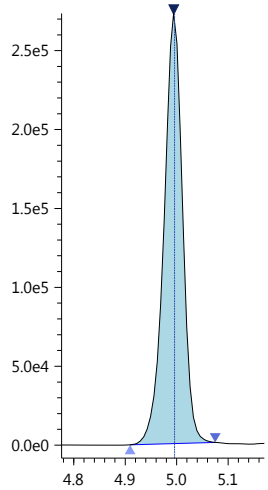
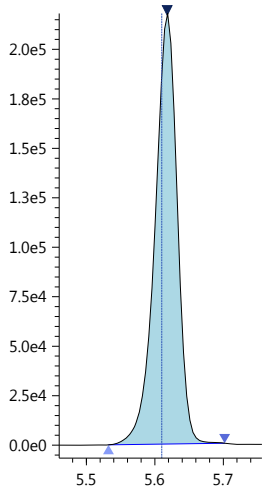
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 684139

ISTD 572.80>419.05 (-) 2.74e5



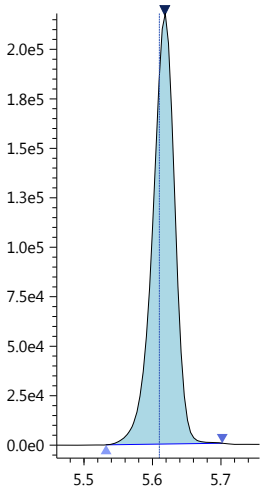
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.618 Area 493051

ISTD 514.90>168.90 (-) 2.18e5



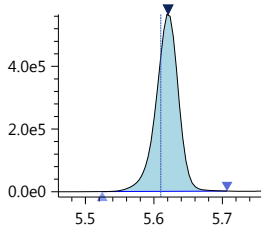
N-MeFOSA-d3
Conc 5.1757
RT 5.618 Area 493051

Q 514.90>168.90 (-) 2.18e5

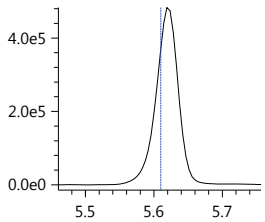


N-MeFOSA
Conc 9.9458
RT 5.621 Area 1294920
R#1 85.78 (0.00)

Q 512.00>169.10 (-) 5.66e5

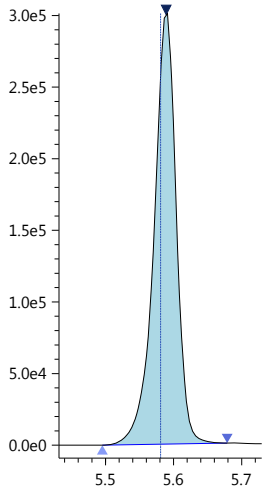


R1 512.00>219.00 (-) 4.83e5



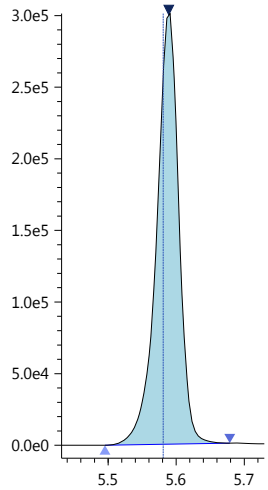
N-MeFOSE-d7
Conc 4.9421
RT 5.589 Area 683903

Q 622.70>59.10 (-) 3.01e5



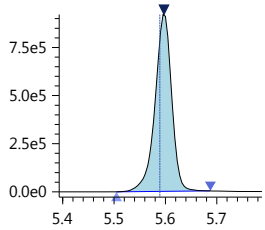
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.589 Area 683903

ISTD 622.70>59.10 (-) 3.01e5

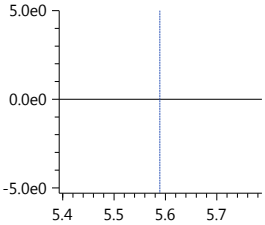


N-MeFOSE
Conc 10.4457
RT 5.597 Area 2075654
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 9.21e5

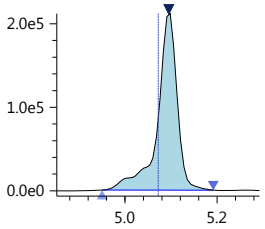


R1 556.00>121.20 (-) 0.00e0

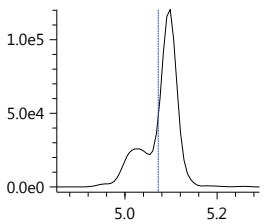


N-EtFOSAA
Conc 10.2652
RT 5.095 Area 626542
R#1 55.20 (0.00)

Q 584.20>418.95 (-) 2.12e5

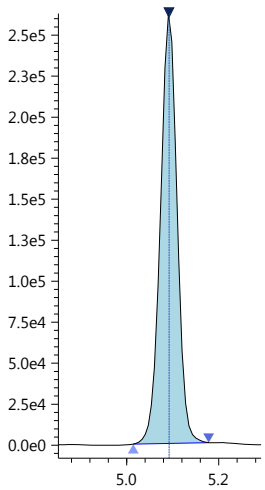


R1 584.20>526.10 (-) 1.20e5



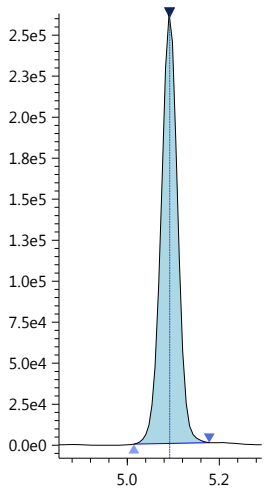
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 663489

ISTD 588.80>419.00 (-) 2.63e5



N-EtFOSAA-d5
Conc 5.2161
RT 5.092 Area 663489

Q 588.80>419.00 (-) 2.63e5



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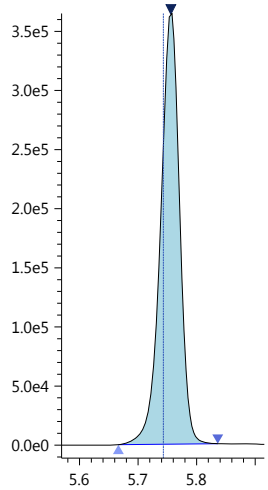
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.756 Area 827430

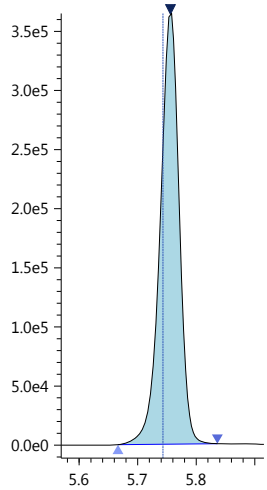
ISTD 530.90>169.15 (-) 3.65e5



N-EtFOSA-d9

Conc 5.1800
RT 5.756 Area 827430

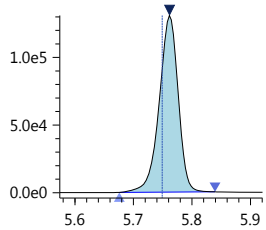
Q 530.90>169.15 (-) 3.65e5



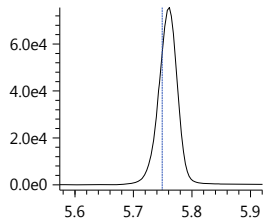
N-EtFOSA

Conc 10.0058
RT 5.762 Area 293448
R#1 58.14 (0.00)

Q 526.90>169.10 (-) 1.31e5



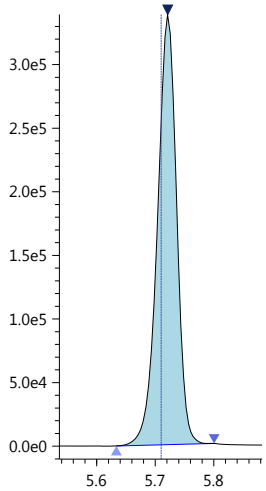
R1 526.90>219.00 (-) 7.56e4



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.721 Area 771526

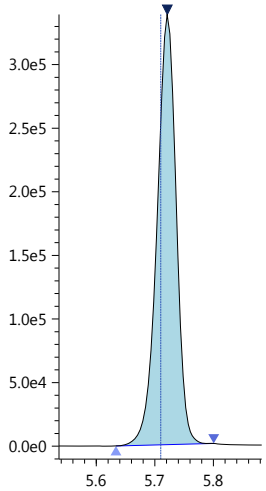
ISTD 638.70>59.10 (-) 3.39e5



N-EtFOSE-d9

Conc 5.1659
RT 5.721 Area 771526

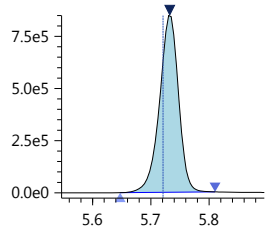
Q 638.70>59.10 (-) 3.39e5



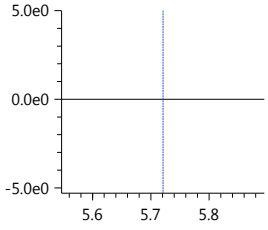
N-EtFOSE

Conc 10.2828
RT 5.732 Area 1929598
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 8.50e5



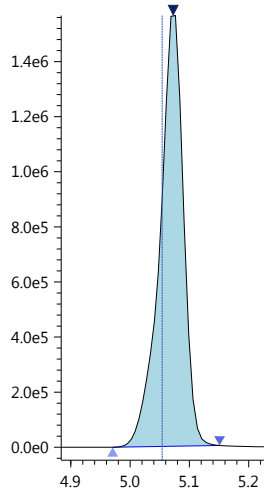
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.073 Area 4366286

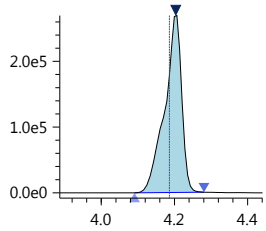
ISTD 570.00>525.00 (-) 1.57e6



PFPeS

Conc 9.5928
RT 4.203 Area 865341
R#1 142.16 (0.00)

Q 349.00>99.00 (-) 2.70e5



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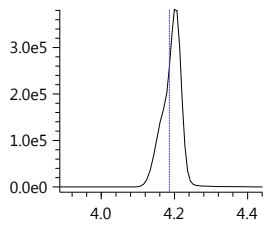

PFNS

Conc 9.4769
RT 4.871 Area 771101
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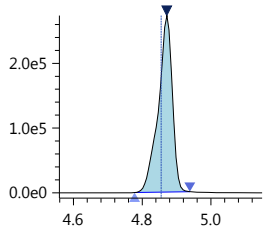
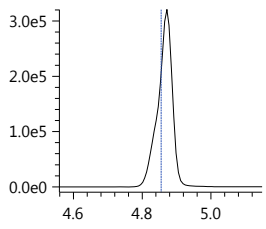
Q 549.00>99.00 (-) 2.74e5



R1 549.00>79.95 (-) 3.21e5



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Printed at 1/7/2019 10:13:37 AM

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PFBA-13C_IS
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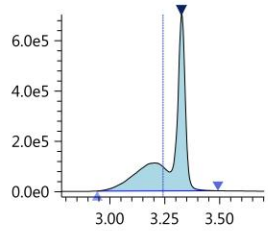
RT 3.326 Area 2873659
ISTD 216.90>172.15 (-) 7.05e5



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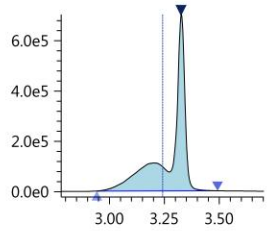
Q 216.90>172.15 (-) 7.05e5



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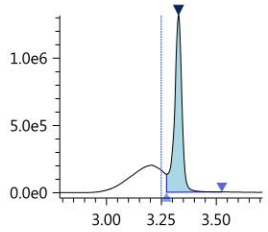
Q 213.00>169.10 (-) 1.32e6



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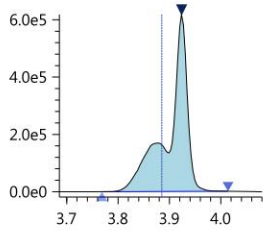
Conc 5.0000
RT 3.924 Area 1581035
ISTD 267.90>223.00 (-) 6.19e5



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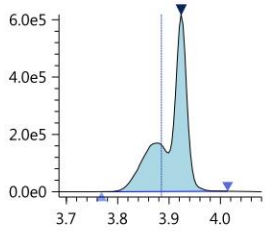
RT 3.924 Area 1581035
Q 267.90>223.00 (-) 6.19e5



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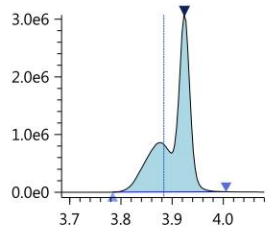
Conc 6.9135
RT 3.924 Area 7834779
Q 263.05>219.10 (-) 3.07e6



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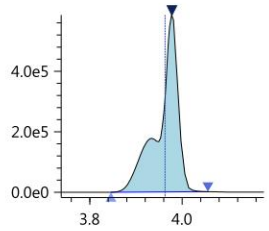
RT 3.978 Area 1682460
Q 299.00>80.00 (-) 5.86e5



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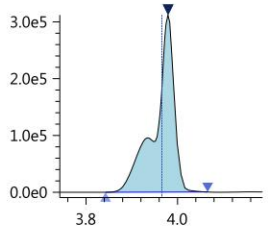
Q 301.80>80.00 (-) 3.12e5



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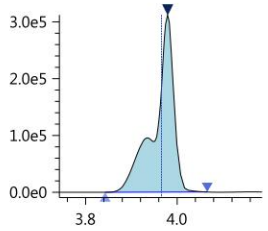

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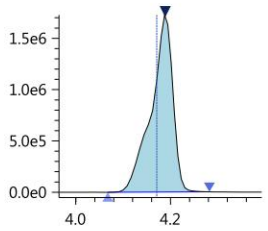

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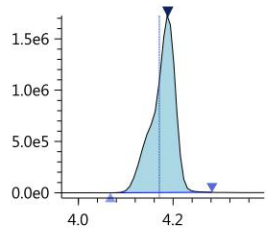

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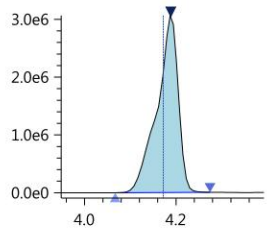
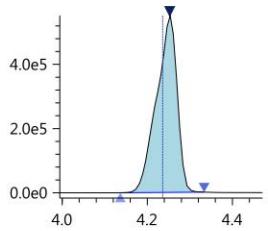
RT 4.188 Area 9786943
Q 313.00>269.00 (-) 3.07e6



HPFO_DA
Conc 10.1328
RT 4.253 Area 1850719
Q 329.00>169.00 (-) 5.52e5



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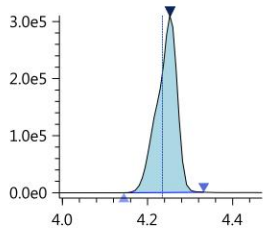
Conc 5.0000
RT 4.253 Area 1000135
ISTD 332.00>286.80 (-) 3.11e5



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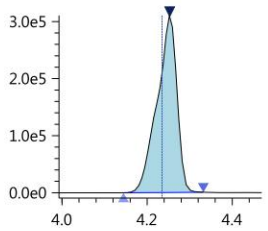
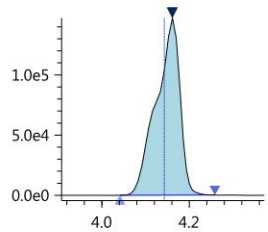
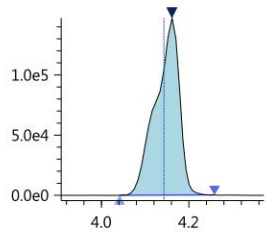
Conc 5.4179
RT 4.253 Area 1000135
Q 332.00>286.80 (-) 3.11e5



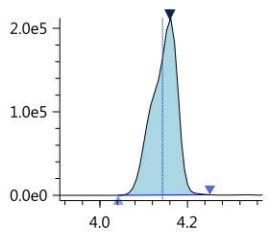
4_2-FTS-13C_IS
Conc 5.0000
RT 4.161 Area 551430
ISTD 328.80>309.05 (-) 1.47e5



4_2-FTS-13C
Conc 5.2109
RT 4.161 Area 551430
Q 328.80>309.05 (-) 1.47e5



4_2-FTS_1
Conc 9.0004
RT 4.160 Area 822178
Q 327.00>307.05 (-) 2.12e5



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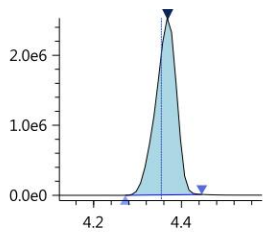
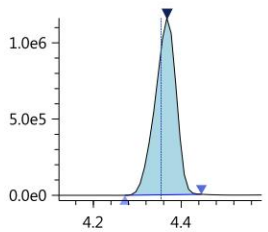
RT 4.369 Area 8381282
Q 362.90>319.00 (-) 2.53e6



PFHpA-13C_IS
Conc 5.0000
RT 4.368 Area 3897871
ISTD 366.90>322.10 (-) 1.16e6



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PFHpA-13C
Conc 4.9850
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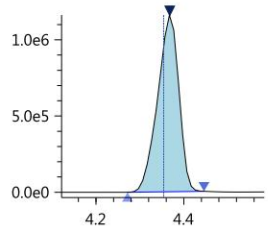
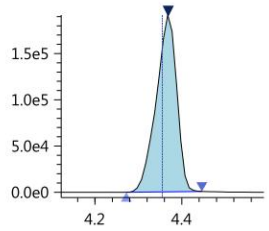
Q 366.90>322.10 (-) 1.16e6



PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 628103
ISTD 402.70>84.05 (-) 1.92e5



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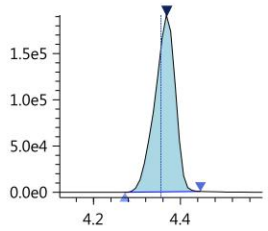
Conc 5.1960
RT 4.369 Area 628103
Q 402.70>84.05 (-) 1.92e5



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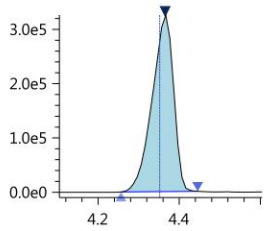
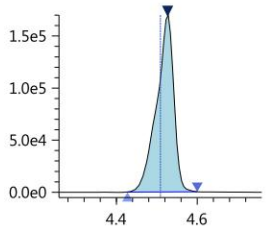
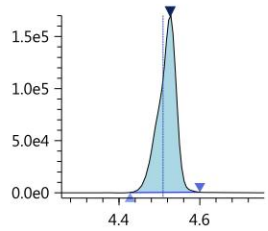
Conc 9.9744
RT 4.365 Area 1191874
Q 399.00>80.00 (-) 3.26e5



6_2-FTS-13C
Conc 4.5486
RT 4.527 Area 499252
Q 428.90>409.00 (-) 1.70e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 499252
ISTD 428.90>409.00 (-) 1.70e5



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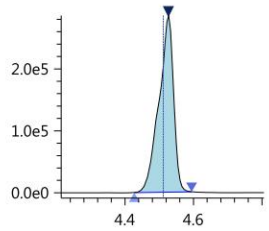
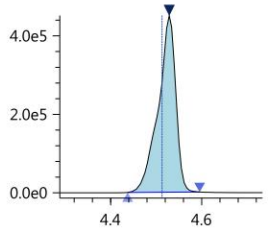
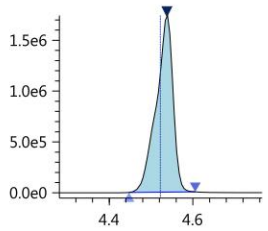
Conc 9.1349
RT 4.527 Area 850109
Q 427.00>407.00 (-) 2.86e5



PFHpS_1
Conc 9.6876
RT 4.529 Area 1200510
Q 449.00>80.15 (-) 4.52e5



PFOA-13C_IS
Conc 5.0000
RT 4.538 Area 4828862
ISTD 416.80>372.05 (-) 1.74e6



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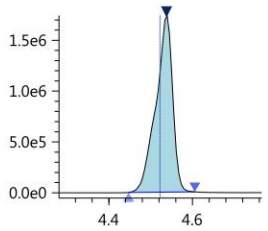
Conc 4.6195
RT 4.538 Area 4828862
Q 416.80>372.05 (-) 1.74e6



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Conc 10.5516
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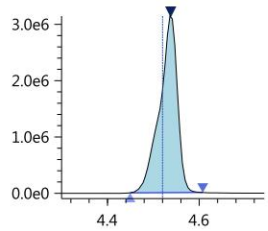
Q 413.00>369.00 (-) 3.15e6



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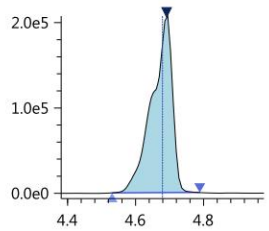
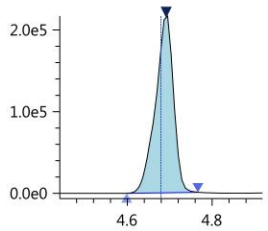
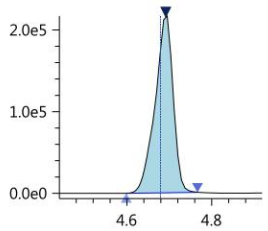
Conc 9.4318
RT 4.691 Area 864555
Q 499.00>80.00 (-) 2.08e5



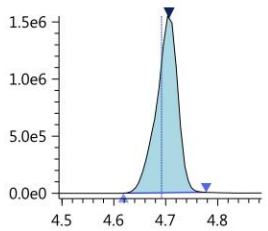
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 641725
ISTD 502.80>80.05 (-) 2.17e5



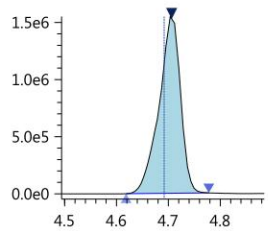
PFOS-13C
Conc 5.1759
RT 4.692 Area 641725
Q 502.80>80.05 (-) 2.17e5



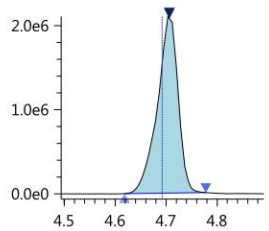
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4438239
ISTD 467.80>423.00 (-) 1.55e6



PFNA-13C
Conc 5.0747
RT 4.706 Area 4438239
Q 467.80>423.00 (-) 1.55e6



PFNA
Conc 10.2033
RT 4.706 Area 5948131
Q 463.00>418.90 (-) 2.11e6



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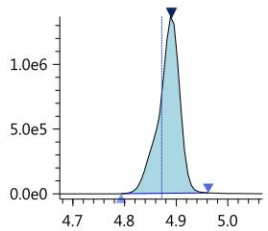
Conc 5.0000
RT 4.891 Area 3784912
ISTD 514.80>469.95 (-) 1.37e6



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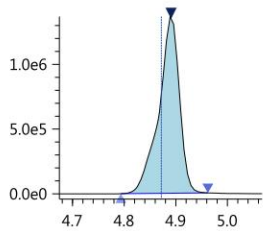
Conc 4.9788
RT 4.891 Area 3784912
Q 514.80>469.95 (-) 1.37e6



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RT 4.891 Area 6411804
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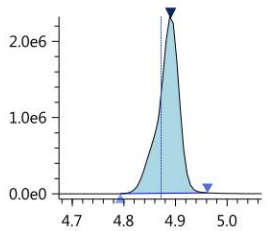

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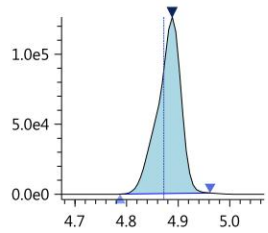
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 390742
ISTD 528.80>509.00 (-) 1.27e5



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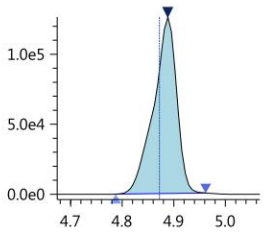
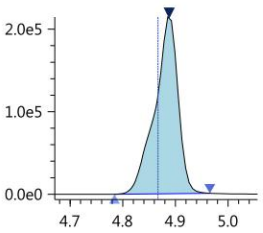
Conc 4.6132
RT 4.888 Area 390742
Q 528.80>509.00 (-) 1.27e5



8_2-FTS_1
Conc 9.5349
RT 4.888 Area 655077
Q 527.10>506.90 (-) 2.15e5



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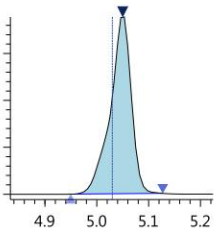
Conc 8.9486
RT 5.050 Area 1069043
Q 599.00>79.90 (-) 3.78e5



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Conc 9.8333
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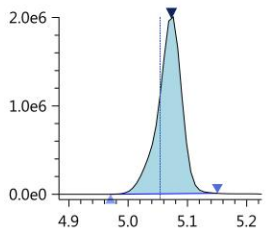
Q 563.00>518.90 (-) 2.01e6



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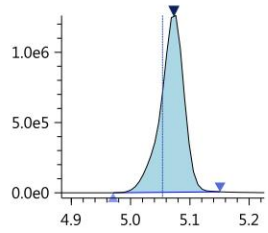
RT 5.073 Area 3500611
ISTD 564.80>519.95 (-) 1.26e6



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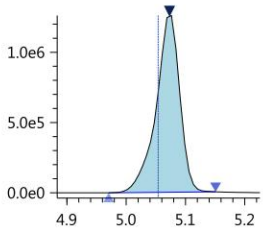
Conc 4.9415
RT 5.073 Area 3500611
Q 564.80>519.95 (-) 1.26e6



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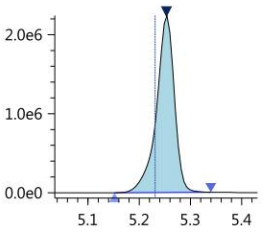
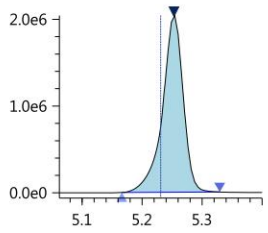
Conc 10.7205
RT 5.253 Area 5442845
Q 613.05>569.00 (-) 2.24e6



PFDoA-13C
Conc 4.7575
RT 5.253 Area 4901750
Q 614.80>569.95 (-) 2.04e6



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Conc 5.0000
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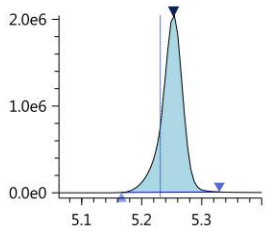
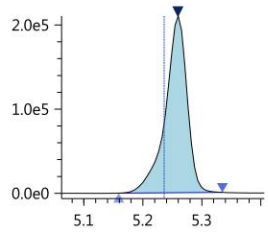
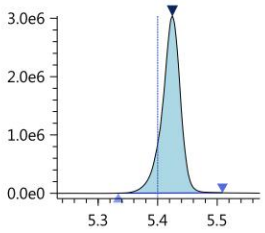
ISTD 614.80>569.95 (-) 2.04e6



10_2-FtS_1
Conc 9.6501
RT 5.259 Area 535541
Q 627.00>606.95 (-) 2.11e5



PFTrDA
Conc 9.7945
RT 5.425 Area 6456012
Q 663.00>618.90 (-) 3.04e6



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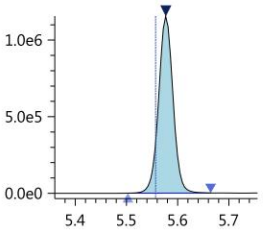
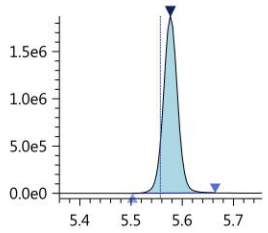
Conc 6.2579
RT 5.577 Area 2258141
Q 713.40>669.00 (-) 1.16e6



PFTeDA-13C
Conc 4.9669
RT 5.577 Area 3629124
Q 714.70>669.90 (-) 1.88e6



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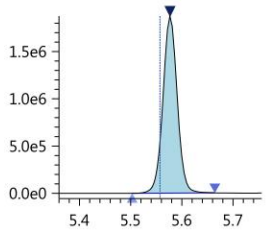
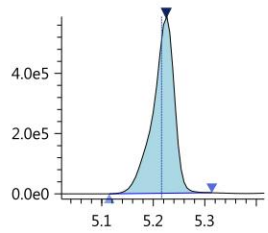
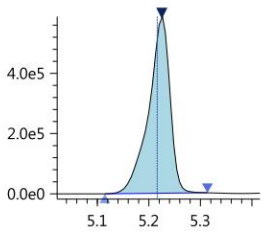
RT 5.577 Area 3629124
ISTD 714.70>669.90 (-) 1.88e6



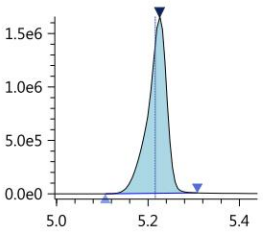
FOSA-13C_IS
Conc 5.0000
RT 5.225 Area 1675483
ISTD 506.00>78.05 (-) 5.89e5



FOSA-13C
Conc 5.0784
RT 5.225 Area 1675483
Q 506.00>78.05 (-) 5.89e5



FOSA
Conc 10.3747
RT 5.225 Area 4655394
Q 498.20>78.00 (-) 1.66e6



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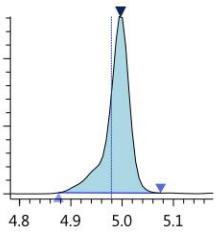
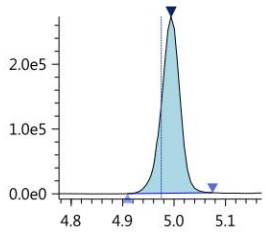
Conc 12.0663
RT 4.997 Area 740308
Q 570.20>419.00 (-) 2.62e5



N-MeFOSAA-d3
Conc 5.2484
RT 4.994 Area 684139
Q 572.80>419.05 (-) 2.74e5



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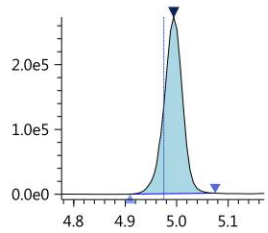
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 684139
ISTD 572.80>419.05 (-) 2.74e5



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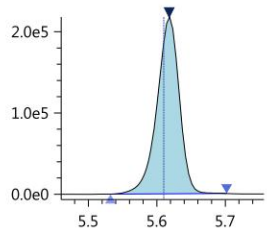
Conc 5.0000
RT 5.618 Area 493051
ISTD 514.90>168.90 (-) 2.18e5



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Conc 5.2340
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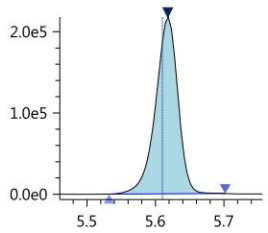
Q 514.90>168.90 (-) 2.18e5



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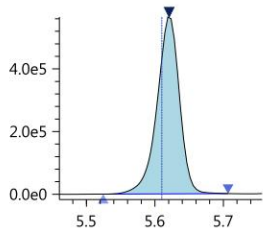
RT 5.621 Area 1294920
Q 512.00>169.10 (-) 5.66e5



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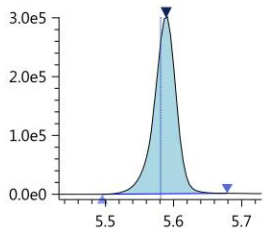
RT 5.589 Area 683903
Q 622.70>59.10 (-) 3.01e5



N-MeFOSE-d7_IS
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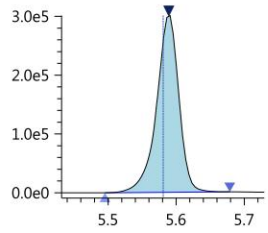
RT 5.589 Area 683903
ISTD 622.70>59.10 (-) 3.01e5



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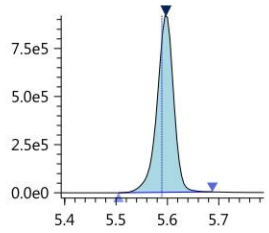
Conc 10.4474
RT 5.597 Area 2075654
Q 616.00>59.00 (-) 9.21e5



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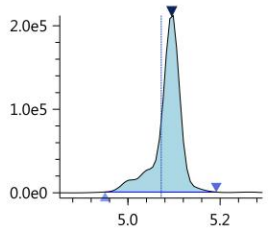
RT 5.095 Area 626542
Q 584.20>418.95 (-) 2.12e5



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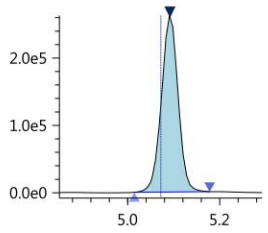
ISTD 588.80>419.00 (-) 2.63e5



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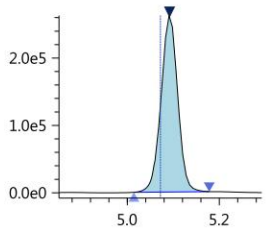

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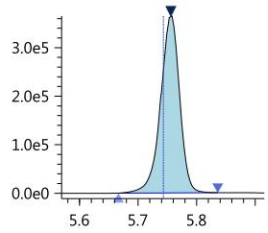
RT 5.756 Area 827430
ISTD 530.90>169.15 (-) 3.65e5



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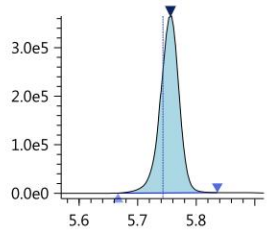
Q 530.90>169.15 (-) 3.65e5



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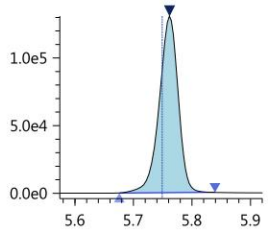
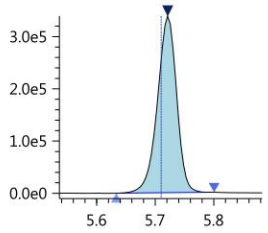
RT 5.762 Area 293448
Q 526.90>169.10 (-) 1.31e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.721 Area 771526
ISTD 638.70>59.10 (-) 3.39e5



N-EtFOSE-d9
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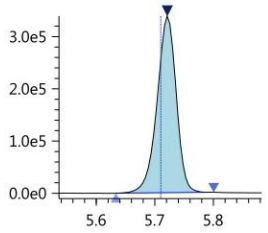
Q 638.70>59.10 (-) 3.39e5



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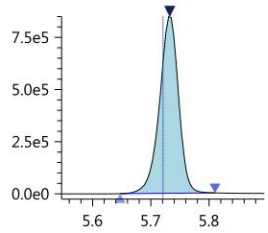
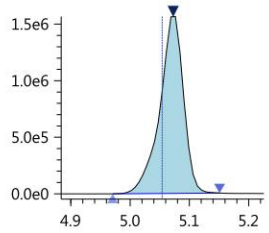
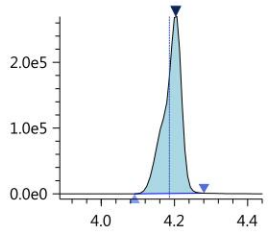
Q 630.00>58.90 (-) 8.50e5



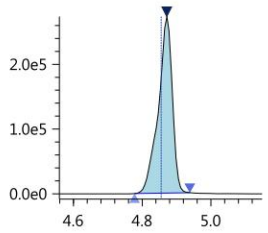
13C7-PFUnDA_IS
Conc 5.0000
RT 5.073 Area 4366286
ISTD 570.00>525.00 (-) 1.57e6



PFPeS
Conc 10.0135
RT 4.203 Area 865341
Q 349.00>99.00 (-) 2.70e5



PFNS
Conc 10.4511
RT 4.871 Area 771101
Q 549.00>99.00 (-) 2.74e5



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Printed at 1/7/2019 12:54:42 PM

010419_022

Sample ID: 15.0 PPB ICAL
Date acquired: 1/4/2019 6:08:54 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_022.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.325	2889620	2889620	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.325	2889620	4076344	26	5.5244	ng/mL	5.0000
PFBA	M	3.326	7731435	2889620	2	15.1689	ng/mL	15.0000
PFPeA-13C_IS	Auto	3.921	1562951	1562951	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.921	1562951	4076344	26	5.3621	ng/mL	5.0000
PFPeA	Auto	3.922	11513018	1562951	4	15.0081	ng/mL	15.0000
PFBS_1	Auto	3.975	2490527	893690	16	13.6805	ng/mL	13.3106
PFBS-13C	Auto	3.977	893690	4076344	26	5.4784	ng/mL	5.0000
PFBS-13C_IS	Auto	3.977	893690	893690	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.186	4841842	4841842	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.186	4841842	4076344	26	4.9745	ng/mL	5.0000
PFHxA	Auto	4.186	13130962	4841842	6	15.3821	ng/mL	15.0000
HPFO_DA	Auto	4.250	2723023	898191	3	16.3515	ng/mL	15.0000
HFPO_DA-13C_IS	Auto	4.249	898191	898191	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.249	898191	4076344	26	5.1804	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.157	541163	541163	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.157	541163	4076344	26	5.4039	ng/mL	5.0000
4_2-FTS_1	Auto	4.156	1224109	541163	5	13.0809	ng/mL	14.0583
PFHpA	Auto	4.367	11850884	3655593	8	15.1819	ng/mL	15.0000
PFHpA-13C_IS	Auto	4.367	3655593	3655593	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.367	3655593	4076344	26	5.0066	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.365	553414	553414	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.365	553414	4076344	26	4.9173	ng/mL	5.0000
PFHxS_1	Auto	4.362	1503978	553414	7	14.1045	ng/mL	13.6961
6_2-FTS-13C	Auto	4.523	469786	4076344	26	4.6396	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.523	469786	469786	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.523	1173346	469786	10	13.5167	ng/mL	14.2676
PFHpS_1	Auto	4.525	1798273	553414	7	16.1207	ng/mL	14.3016
PFOA-13C_IS	Auto	4.535	4787537	4787537	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.535	4787537	4076344	26	4.9190	ng/mL	5.0000
PFOA	Auto	4.535	11460200	4787537	9	14.6007	ng/mL	15.0000
PFOS_1	Auto	4.688	1300988	638640	13	13.8132	ng/mL	13.9384
PFOS-13C_IS	Auto	4.689	638640	638640	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.689	638640	4076344	26	5.4370	ng/mL	5.0000
PFNA-13C_IS	Auto	4.703	3848832	3848832	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.703	3848832	4076344	26	4.7527	ng/mL	5.0000
PFNA	Auto	4.703	7565209	3848832	11	14.7575	ng/mL	15.0000
PFDA-13C_IS	Auto	4.888	3451563	3451563	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.888	3451563	4076344	26	4.8823	ng/mL	5.0000
PFDA	Auto	4.888	8698863	3451563	12	15.0528	ng/mL	15.0000
8_2-FTS-13C_IS	Auto	4.887	383818	383818	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.887	383818	4076344	26	4.8742	ng/mL	5.0000
8_2-FTS_1	Auto	4.885	827668	383818	15	12.2329	ng/mL	14.4007
PFDS_1	Auto	5.047	1571894	638640	13	13.3864	ng/mL	14.4700
PFUnA	Auto	5.070	8125999	3310357	14	15.1918	ng/mL	15.0000
PFUnA-13C_IS	Auto	5.070	3310357	3310357	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.070	3310357	4076344	26	5.0045	ng/mL	5.0000
PFDoA	Auto	5.250	7804427	4735490	17	15.0595	ng/mL	15.0000
PFDoA-13C	Auto	5.250	4735490	4076344	26	4.9339	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.250	4735490	4735490	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.256	738160	383818	15	13.4487	ng/mL	14.4929
PFTrDA	Auto	5.421	9597208	3572512	22	14.9838	ng/mL	15.0000
PFTeDA	Auto	5.572	3304009	3572512	22	14.9364	ng/mL	15.0000
PFTeDA-13C	Auto	5.572	3572512	4076344	26	5.2019	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.572	3572512	3572512	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.221	1698446	1698446	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.221	1698446	4076344	26	5.4344	ng/mL	5.0000
FOSA	Auto	5.222	6706654	1698446	18	14.7800	ng/mL	15.0000
N-MeFOSAA	Auto	4.994	1047916	678436	19	14.7346	ng/mL	15.0000
N-MeFOSAA-d3	Auto	4.991	678436	4076344	26	5.4848	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.991	678436	678436	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.613	474397	474397	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.613	474397	4076344	26	5.3341	ng/mL	5.0000
N-MeFOSA	Auto	5.616	1916807	474397	1	15.3012	ng/mL	15.0000
N-MeFOSE-d7	Auto	5.585	688388	4076344	26	5.3284	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.585	688388	688388	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.593	3003105	688388	20	15.0147	ng/mL	15.0000

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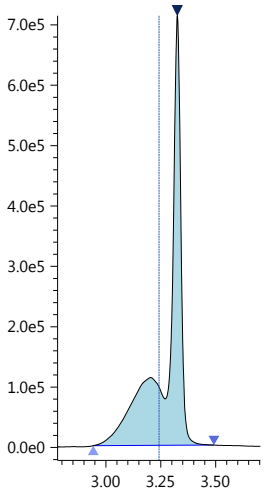
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.093	867587	644223	21	14.6272	ng/mL	15.0000
N-EtFOSAA-d5_IS	Auto	5.089	644223	644223	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.089	644223	4076344	26	5.4249	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.752	817818	817818	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.752	817818	4076344	26	5.4840	ng/mL	5.0000
N-EtFOSA	Auto	5.758	433623	817818	23	14.9592	ng/mL	15.0000
N-EtFOSE-d9_IS	Auto	5.717	778943	778943	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.717	778943	4076344	26	5.5866	ng/mL	5.0000
N-EtFOSE	Auto	5.728	2776328	778943	24	14.6541	ng/mL	15.0000
13C7-PFUnDA_IS	Auto	5.070	4076344	4076344	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.201	1255815	893690	16	14.0174	ng/mL	14.1138
PFNS	Auto	4.868	1214006	638640	13	14.9924	ng/mL	14.4237

PFBA-13C_IS
Conc 5.0000
RT 3.325 Area 2889620
ISTD 216.90>172.15 (-) 7.15e5



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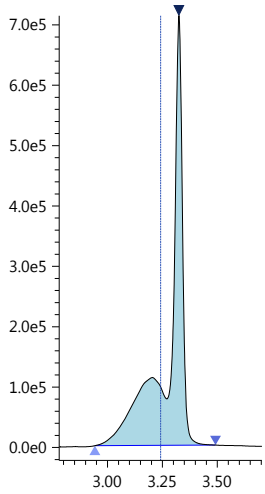
RT 3.325 Area 2889620
Q 216.90>172.15 (-) 7.15e5



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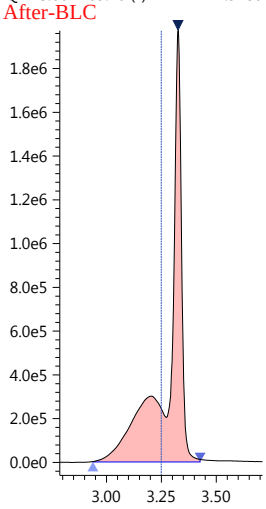
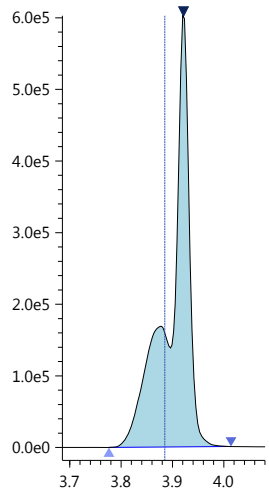
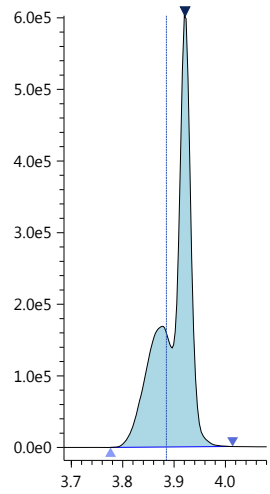
RT 3.326 Area 7731435
Q 213.00>169.10 (-) 1.97e6
After-BLC



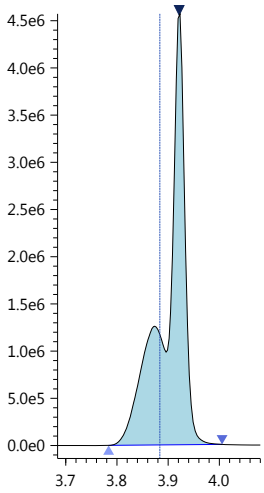
PFPeA-13C_IS
Conc 5.0000
RT 3.921 Area 1562951
ISTD 267.90>223.00 (-) 6.03e5



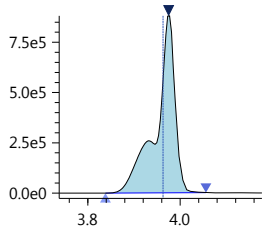
PFPeA-13C
Conc 5.3621
RT 3.921 Area 1562951
Q 267.90>223.00 (-) 6.03e5



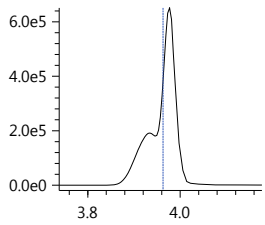
PFPeA
Conc 15.0081
RT 3.922 Area 11513018
Q 263.05>219.10 (-) 4.57e6



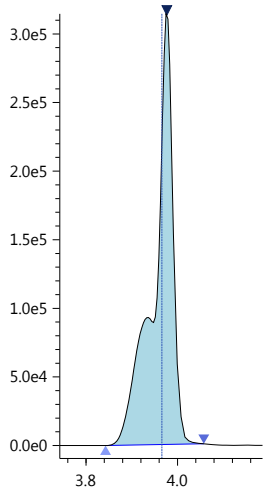
PFBS_1
Conc 13.6805
RT 3.975 Area 2490527
R#1 71.19 (0.00)
Q 299.00>80.00 (-) 8.81e5



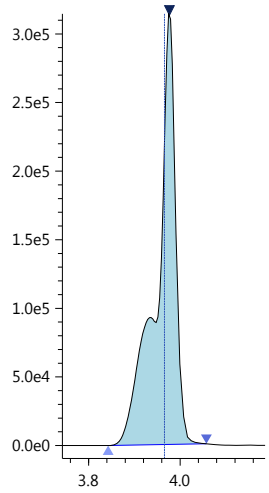
R1 298.80>99.00 (-) 6.51e5



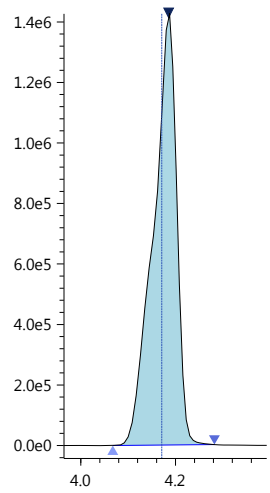
PFBS-13C
Conc 5.4784
RT 3.977 Area 893690
Q 301.80>80.00 (-) 3.15e5



PFBS-13C_IS
Conc 5.0000
RT 3.977 Area 893690
ISTD 301.80>80.00 (-) 3.15e5



PFHxA-13C_IS
Conc 5.0000
RT 4.186 Area 4841842
ISTD 314.90>270.10 (-) 1.43e6



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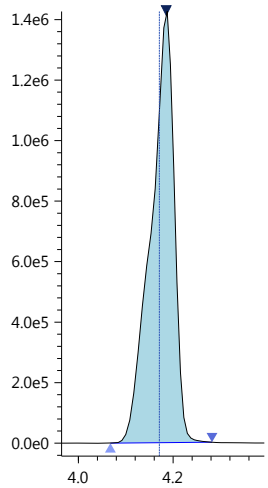
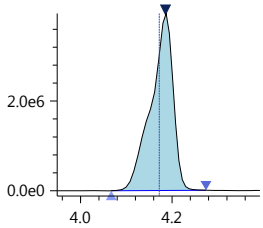
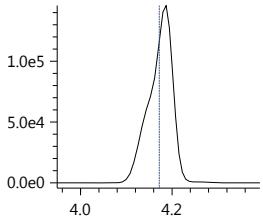
PFHxA-13C
Conc 4.9745
RT 4.186 Area 4841842
Q 314.90>270.10 (-) 1.43e6



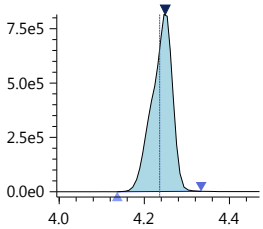
PFHxA
Conc 15.3821
RT 4.186 Area 13130962
R#1 3.77 (0.00)
Q 313.00>269.00 (-) 3.95e6



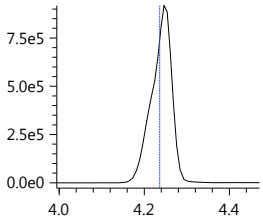
R1 313.00>119.10 (-) 1.46e5



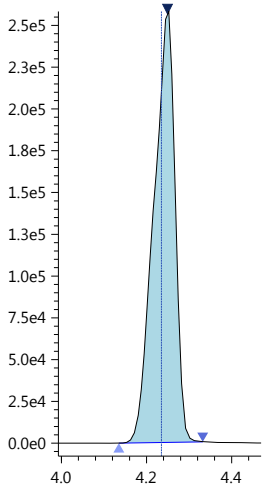
HPFO_DA
Conc 16.3515
RT 4.250 Area 2723023
R#1 112.84 (0.00)
Q 329.00>169.00 (-) 8.16e5



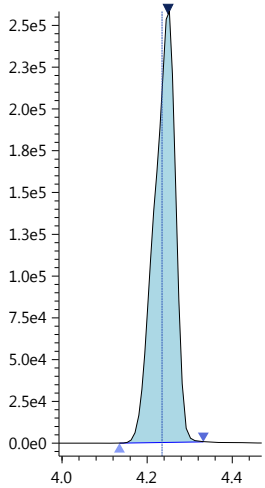
R1 329.00>285.10 (-) 9.18e5



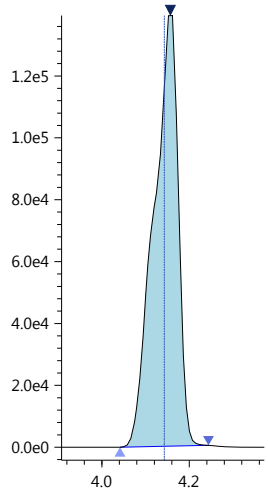
HFPO_DA-13C_IS
Conc 5.0000
RT 4.249 Area 898191
ISTD 332.00>286.80 (-) 2.58e5



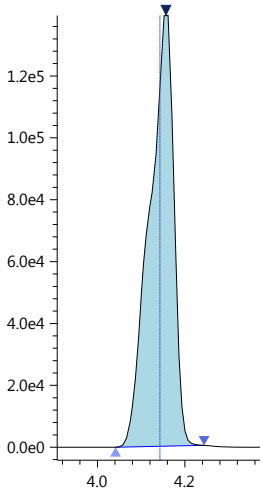
HFPO_DA-13C
Conc 5.1804
RT 4.249 Area 898191
Q 332.00>286.80 (-) 2.58e5



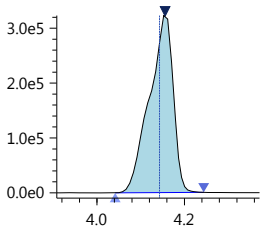
4_2-FTS-13C_IS
Conc 5.0000
RT 4.157 Area 541163
ISTD 328.80>309.05 (-) 1.40e5



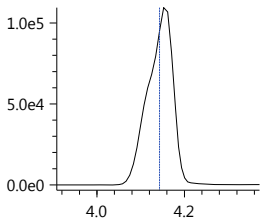
4_2-FTS-13C
Conc 5.4039
RT 4.157 Area 541163
Q 328.80>309.05 (-) 1.40e5



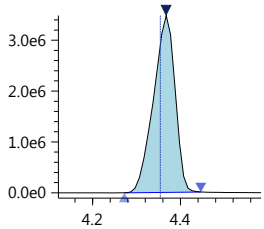
4_2-FTS_1
Conc 13.0809
RT 4.156 Area 1224109
R#1 33.94 (0.00)
Q 327.00>307.05 (-) 3.23e5



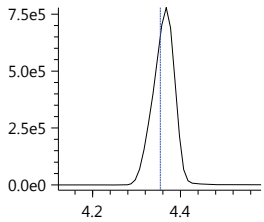
R1 327.00>81.10 (-) 1.09e5



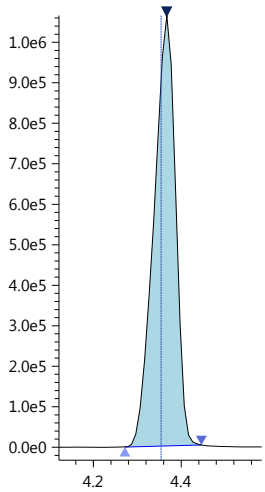
PFHpA
Conc 15.1819
RT 4.367 Area 11850884
R#1 22.35 (0.00)
Q 362.90>319.00 (-) 3.48e6



R1 362.90>169.00 (-) 7.79e5



PFHpA-13C_IS
Conc 5.0000
RT 4.367 Area 3655593
ISTD 366.90>322.10 (-) 1.07e6



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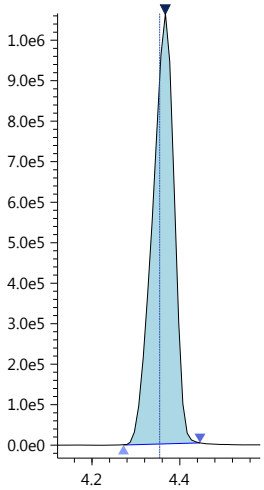
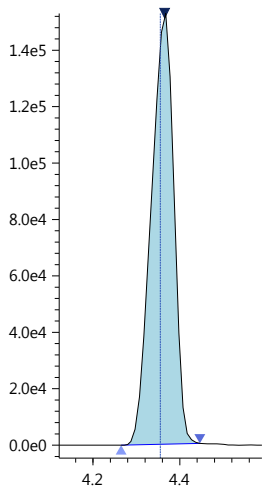
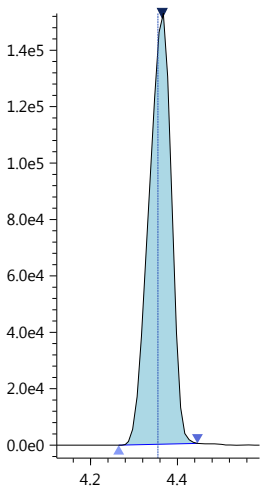
PFHpA-13C
Conc 5.0066
RT 4.367 Area 3655593
Q 366.90>322.10 (-) 1.07e6



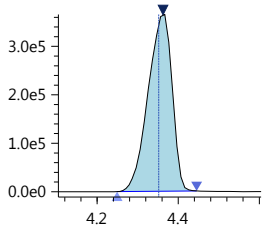
PFHxS-18O_IS
Conc 5.0000
RT 4.365 Area 553414
ISTD 402.70>84.05 (-) 1.53e5



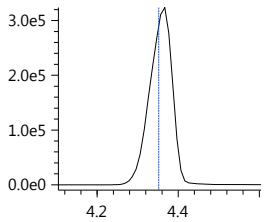
PFHxS-18O
Conc 4.9173
RT 4.365 Area 553414
Q 402.70>84.05 (-) 1.53e5



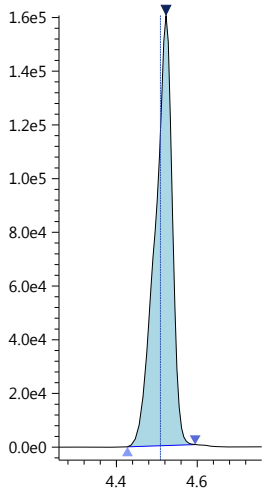
PFHxS_1
Conc 14.1045
RT 4.362 Area 1503978
R#1 88.24 (0.00)
Q 399.00>80.00 (-) 3.66e5



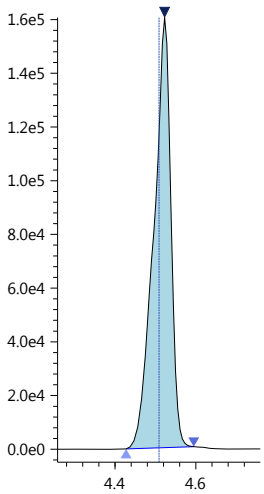
R1 399.00>99.00 (-) 3.24e5



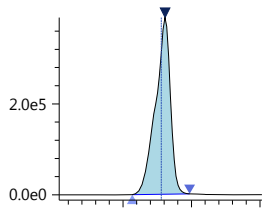
6_2-FTS-13C
Conc 4.6396
RT 4.523 Area 469786
Q 428.90>409.00 (-) 1.61e5



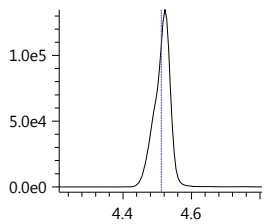
6_2-FTS-13C_IS
Conc 5.0000
RT 4.523 Area 469786
ISTD 428.90>409.00 (-) 1.61e5



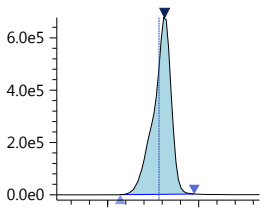
6_2-FTS_1
Conc 13.5167
RT 4.523 Area 1173346
R#1 34.56 (0.00)
Q 427.00>407.00 (-) 3.90e5



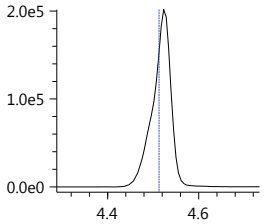
R1 427.00>80.90 (-) 1.35e5



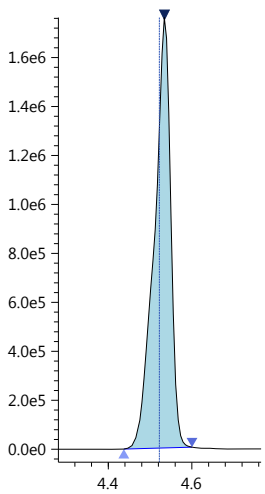
PFHpS_1
Conc 16.1207
RT 4.525 Area 1798273
R#1 29.79 (0.00)
Q 449.00>80.15 (-) 6.78e5



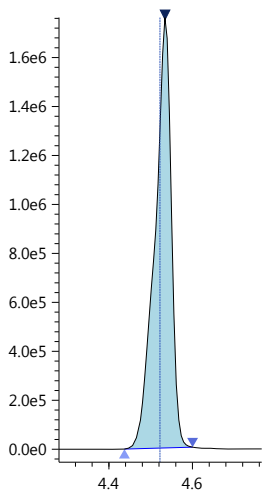
R1 449.00>99.20 (-) 2.02e5



PFOA-13C_IS
Conc 5.0000
RT 4.535 Area 4787537
ISTD 416.80>372.05 (-) 1.76e6



PFOA-13C
Conc 4.9190
RT 4.535 Area 4787537
Q 416.80>372.05 (-) 1.76e6



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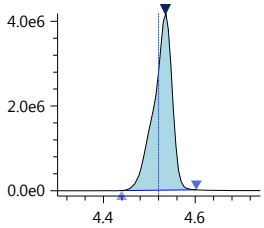
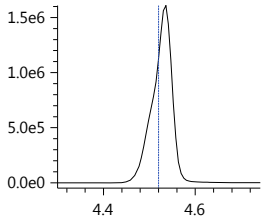
PFOA

Conc 14.6007
RT 4.535 Area 11460200
R#1 38.36 (0.00)

Q 413.00>369.00 (-) 4.18e6



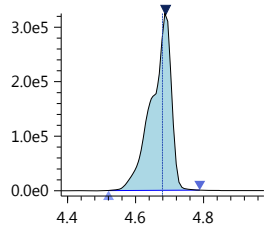
R1 413.00>169.10 (-) 1.61e6



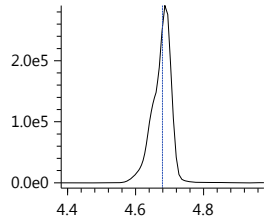
PFOS_1

Conc 13.8132
RT 4.688 Area 1300988
R#1 89.40 (0.00)

Q 499.00>80.00 (-) 3.25e5



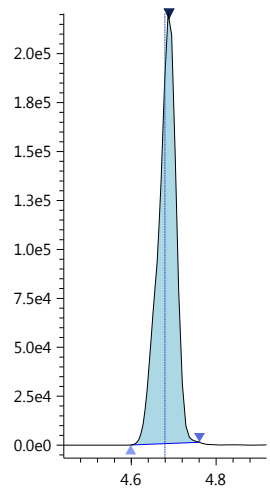
R1 499.00>99.00 (-) 2.90e5



PFOS-13C_IS

Conc 5.0000
RT 4.689 Area 638640

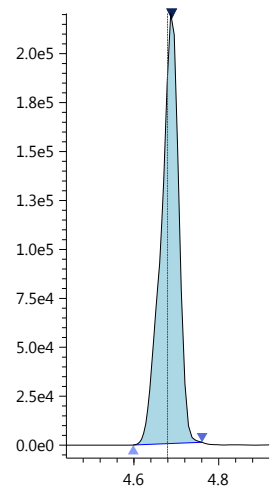
ISTD 502.80>80.05 (-) 2.21e5



PFOS-13C

Conc 5.4370
RT 4.689 Area 638640

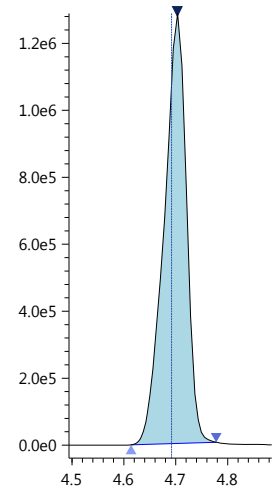
Q 502.80>80.05 (-) 2.21e5



PFNA-13C_IS

Conc 5.0000
RT 4.703 Area 3848832

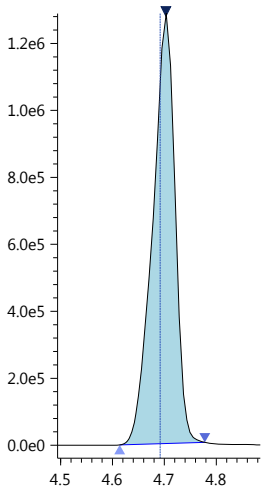
ISTD 467.80>423.00 (-) 1.29e6



PFNA-13C

Conc 4.7527
RT 4.703 Area 3848832

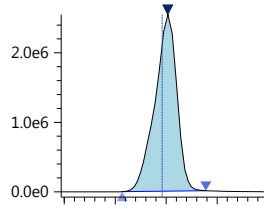
Q 467.80>423.00 (-) 1.29e6



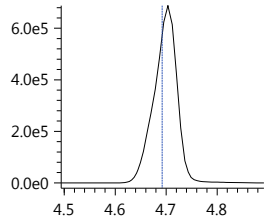
PFNA

Conc 14.7575
RT 4.703 Area 7565209
R#1 26.97 (0.00)

Q 463.00>418.90 (-) 2.55e6



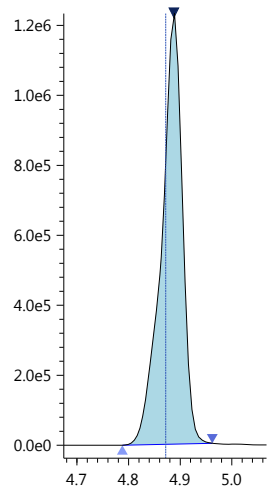
R1 463.00>219.00 (-) 6.88e5



PFDA-13C_IS

Conc 5.0000
RT 4.888 Area 3451563

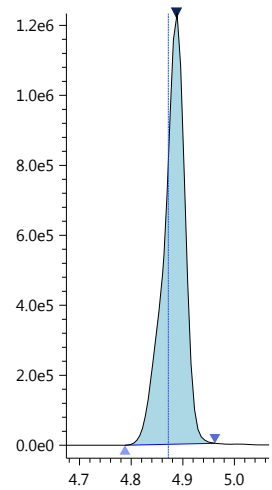
ISTD 514.80>469.95 (-) 1.23e6



PFDA-13C

Conc 4.8823
RT 4.888 Area 3451563

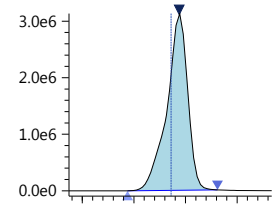
Q 514.80>469.95 (-) 1.23e6



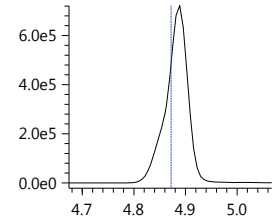
PFDA

Conc 15.0528
RT 4.888 Area 8698863
R#1 22.99 (0.00)

Q 513.00>468.80 (-) 3.13e6



R1 513.00>219.10 (-) 7.22e5



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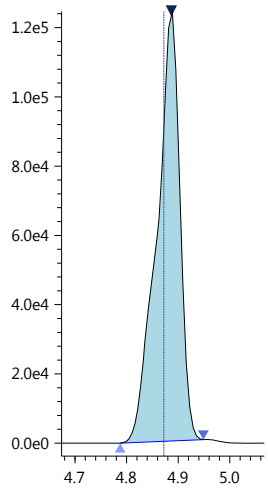
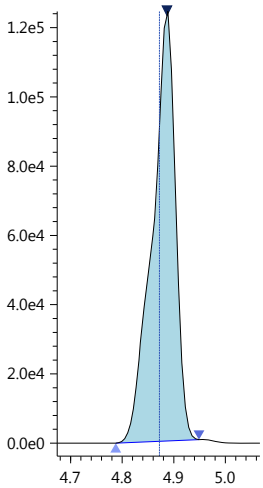
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 383818

ISTD 528.80>509.00 (-) 1.25e5



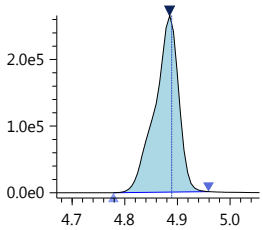
8_2-FTS-13C
Conc 4.8742
RT 4.887 Area 383818

Q 528.80>509.00 (-) 1.25e5

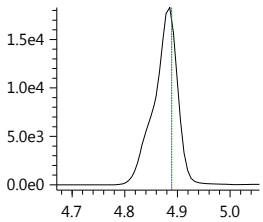


8_2-FTS_1
Conc 12.2329
RT 4.885 Area 827668
R#1 6.89 (0.00)

Q 527.10>506.90 (-) 2.66e5

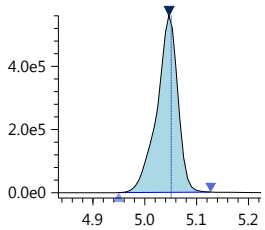


R1 527.20>487.00 (-) 1.83e4

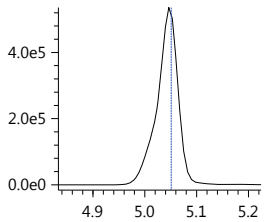


PFDS_1
Conc 13.3864
RT 5.047 Area 1571894
R#1 95.43 (0.00)

Q 599.00>79.90 (-) 5.61e5

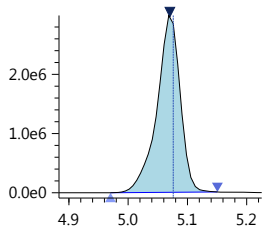


R1 599.00>99.10 (-) 5.36e5

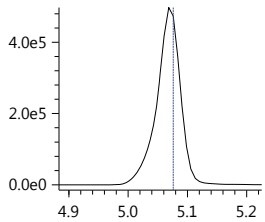


PFUnA
Conc 15.1918
RT 5.070 Area 8125999
R#1 16.61 (0.00)

Q 563.00>518.90 (-) 3.00e6

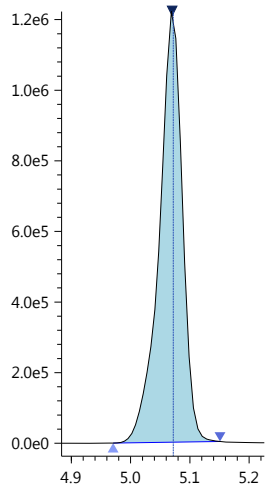


R1 563.00>219.00 (-) 4.97e5



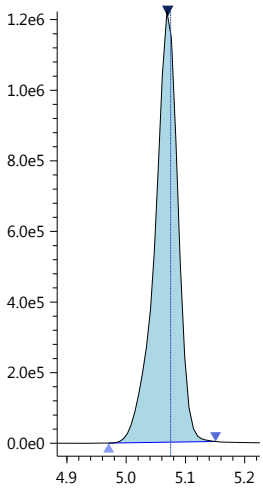
PFUnA-13C_IS
Conc 5.0000
RT 5.070 Area 3310357

ISTD 564.80>519.95 (-) 1.22e6



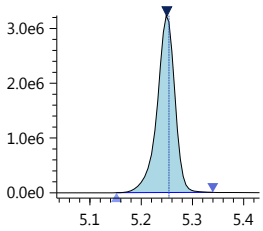
PFUnA-13C
Conc 5.0045
RT 5.070 Area 3310357

Q 564.80>519.95 (-) 1.22e6

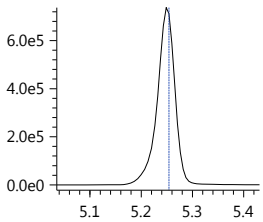


PFDoA
Conc 15.0595
RT 5.250 Area 7804427
R#1 22.84 (0.00)

Q 613.05>569.00 (-) 3.24e6

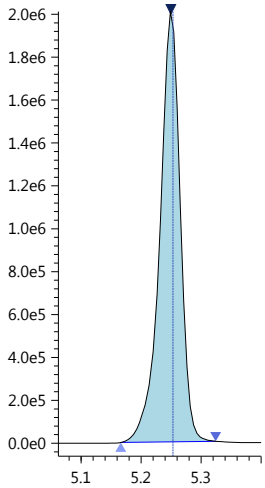


R1 613.05>169.00 (-) 7.37e5



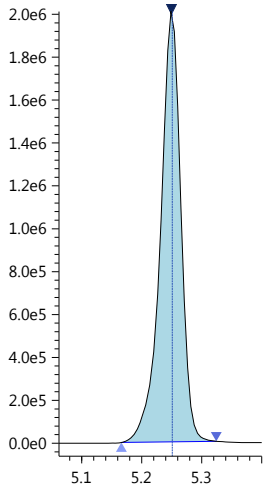
PFDoA-13C
Conc 4.9339
RT 5.250 Area 4735490

Q 614.80>569.95 (-) 2.01e6



PFDoA-13C_IS
Conc 5.0000
RT 5.250 Area 4735490

ISTD 614.80>569.95 (-) 2.01e6



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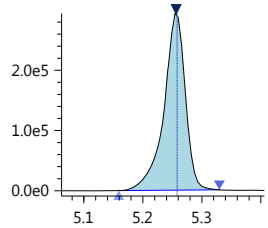
10_2-FtS_1

Conc 13.4487
RT 5.256 Area 738160
R#1 16.44 (0.00)

Q 627.00>606.95 (-) 2.94e5



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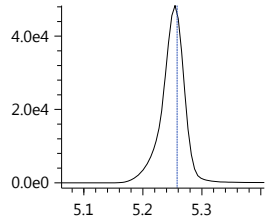
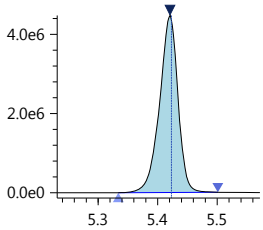


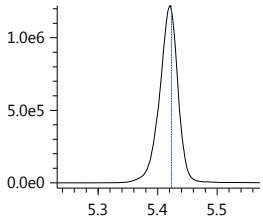
PFTrDA

Conc 14.9838
RT 5.421 Area 9597208
R#1 27.42 (0.00)

Q 663.00>618.90 (-) 4.48e6



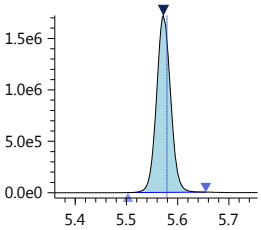
R1 662.90>169.00 (-) 1.22e6



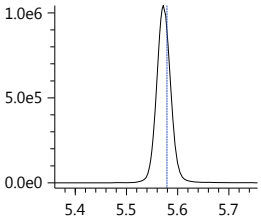
PFTeDA

Conc 14.9364
RT 5.572 Area 3304009
R#1 60.78 (0.00)

Q 713.40>669.00 (-) 1.72e6



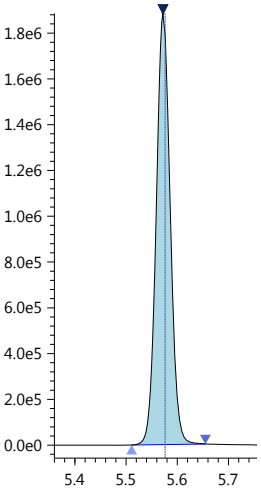
R1 713.40>169.10 (-) 1.04e6



PFTeDA-13C

Conc 5.2019
RT 5.572 Area 3572512

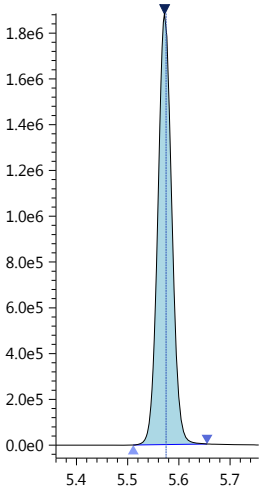
Q 714.70>669.90 (-) 1.89e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.572 Area 3572512

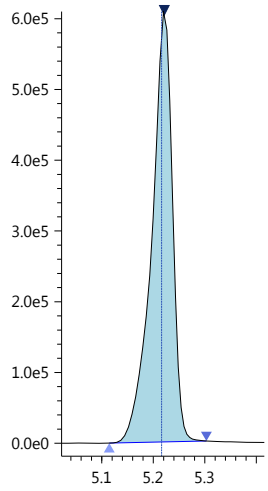
ISTD 714.70>669.90 (-) 1.89e6



FOSA-13C_IS

Conc 5.0000
RT 5.221 Area 1698446

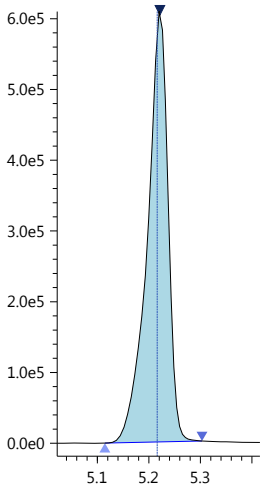
ISTD 506.00>78.05 (-) 6.10e5



FOSA-13C

Conc 5.4344
RT 5.221 Area 1698446

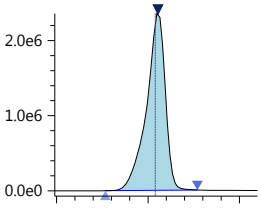
Q 506.00>78.05 (-) 6.10e5



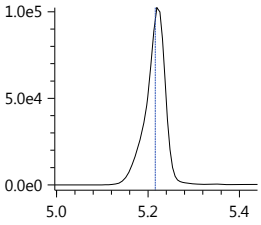
FOSA

Conc 14.7800
RT 5.222 Area 6706654
R#1 4.35 (0.00)

Q 498.20>78.00 (-) 2.36e6



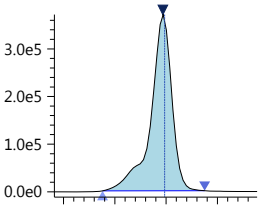
R1 498.20>64.10 (-) 1.02e5



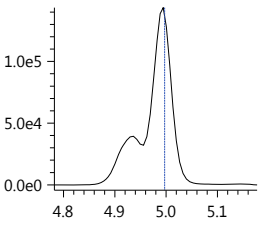
N-MeFOSAA

Conc 14.7346
RT 4.994 Area 1047916
R#1 38.37 (0.00)

Q 570.20>419.00 (-) 3.72e5



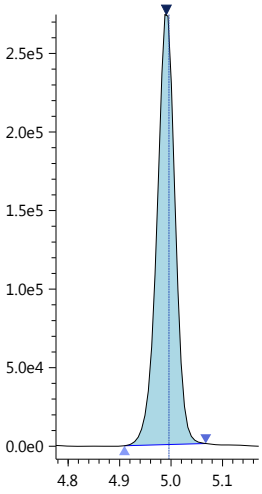
R1 570.20>512.00 (-) 1.44e5



N-MeFOSAA-d3

Conc 5.4848
RT 4.991 Area 678436

Q 572.80>419.05 (-) 2.75e5



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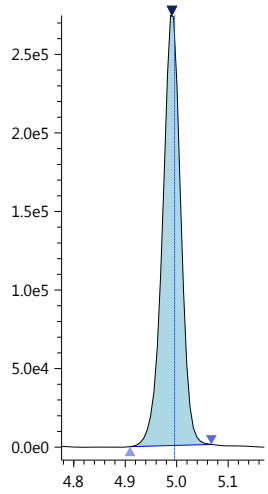
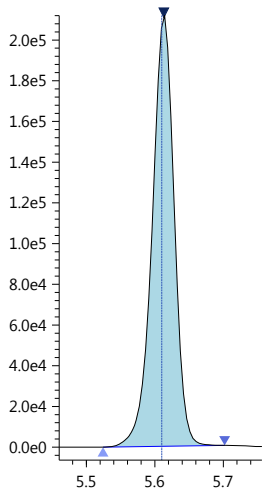
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.991 Area 678436

ISTD 572.80>419.05 (-) 2.75e5



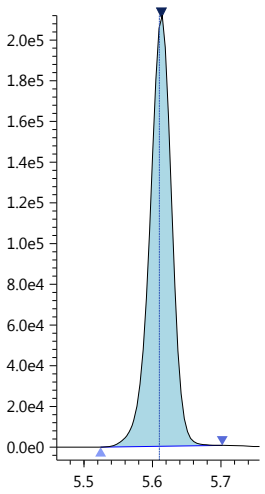
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.613 Area 474397

ISTD 514.90>168.90 (-) 2.12e5



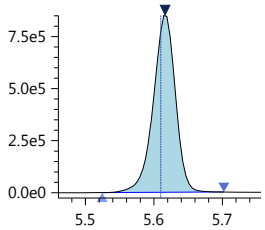
N-MeFOSA-d3
Conc 5.3341
RT 5.613 Area 474397

Q 514.90>168.90 (-) 2.12e5

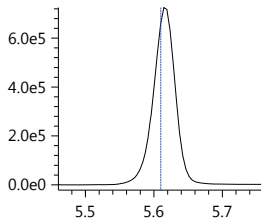


N-MeFOSA
Conc 15.3012
RT 5.616 Area 1916807
R#1 85.71 (0.00)

Q 512.00>169.10 (-) 8.51e5

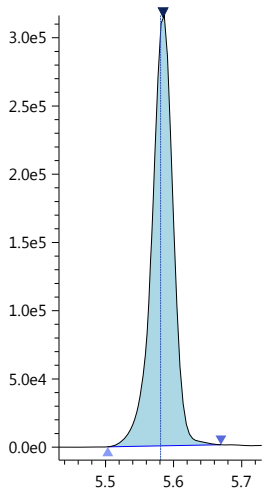


R1 512.00>219.00 (-) 7.25e5



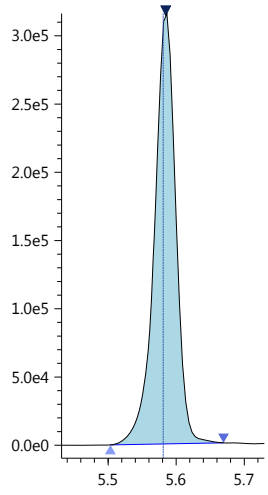
N-MeFOSE-d7
Conc 5.3284
RT 5.585 Area 688388

Q 622.70>59.10 (-) 3.16e5



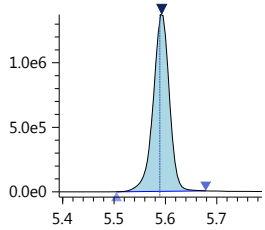
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.585 Area 688388

ISTD 622.70>59.10 (-) 3.16e5

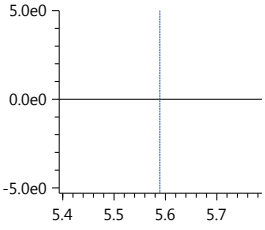


N-MeFOSE
Conc 15.0147
RT 5.593 Area 3003105
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 1.37e6

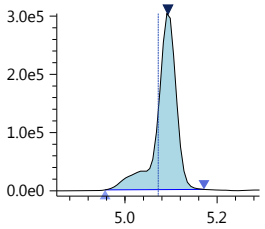


R1 556.00>121.20 (-) 0.00e0

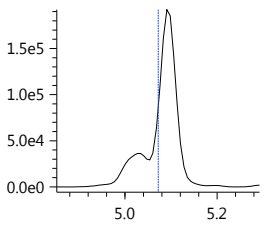


N-EtFOSAA
Conc 14.6272
RT 5.093 Area 867587
R#1 63.02 (0.00)

Q 584.20>418.95 (-) 3.04e5

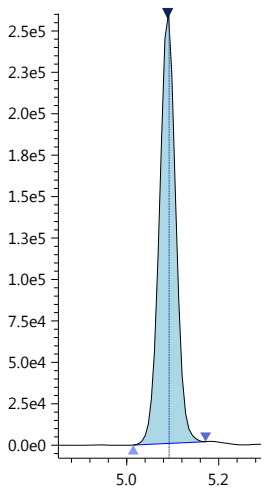


R1 584.20>526.10 (-) 1.92e5



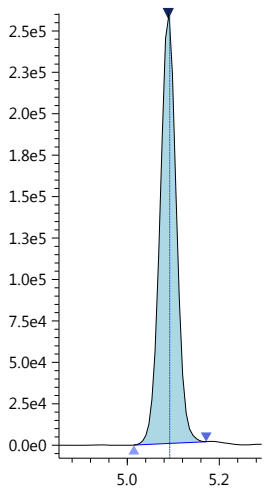
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.089 Area 644223

ISTD 588.80>419.00 (-) 2.60e5



N-EtFOSAA-d5
Conc 5.4249
RT 5.089 Area 644223

Q 588.80>419.00 (-) 2.60e5



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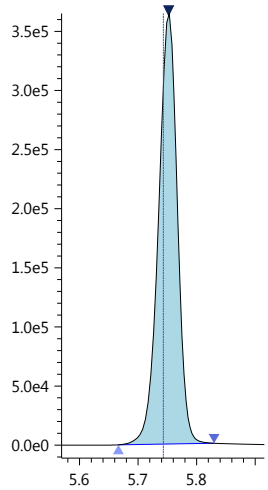
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.752 Area 817818

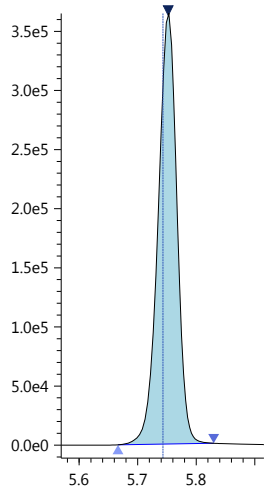
ISTD 530.90>169.15 (-) 3.65e5



N-EtFOSA-d9

Conc 5.4840
RT 5.752 Area 817818

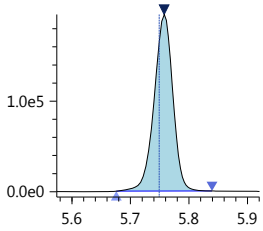
Q 530.90>169.15 (-) 3.65e5



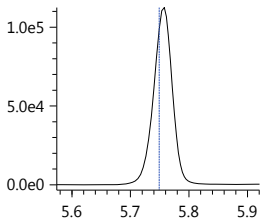
N-EtFOSA

Conc 14.9592
RT 5.758 Area 433623
R#1 58.08 (0.00)

Q 526.90>169.10 (-) 1.96e5



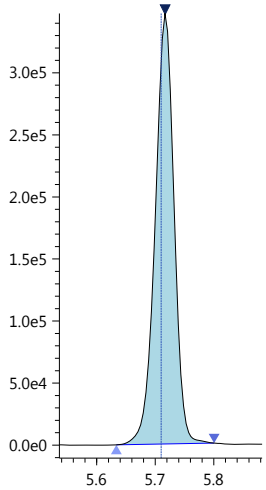
R1 526.90>219.00 (-) 1.12e5



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.717 Area 778943

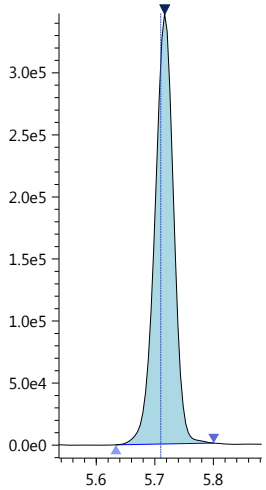
ISTD 638.70>59.10 (-) 3.48e5



N-EtFOSE-d9

Conc 5.5866
RT 5.717 Area 778943

Q 638.70>59.10 (-) 3.48e5



N-EtFOSE

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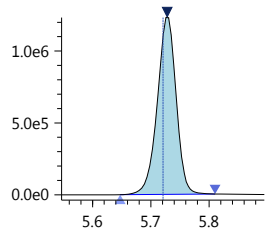
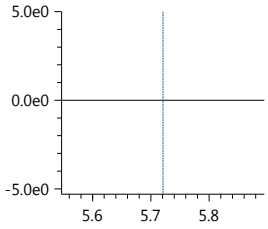
RT 5.728 Area 2776328
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 1.23e6



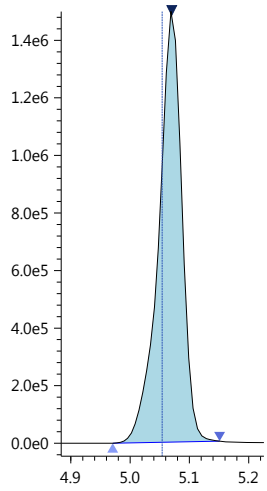
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.070 Area 4076344

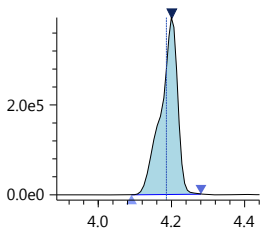
ISTD 570.00>525.00 (-) 1.50e6



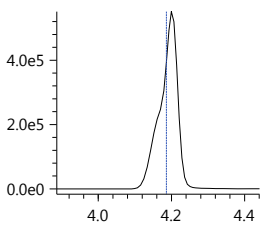
PFPeS

Conc 14.0174
RT 4.201 Area 1255815
R#1 139.53 (0.00)

Q 349.00>99.00 (-) 3.95e5



R1 349.00>79.95 (-) 5.51e5



PFNS

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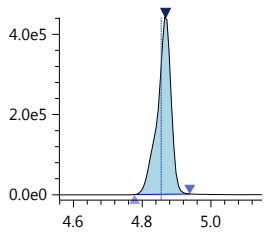
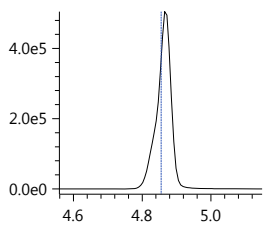
RT 4.868 Area 1214006
R#1 114.27 (0.00)

Q 549.00>99.00 (-) 4.42e5



R1 549.00>79.95 (-) 5.05e5



Insight Report

Printed at 1/7/2019 10:13:37 AM

010419_022

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Date acquired: 1/4/2019 6:08:54 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_022.lcd
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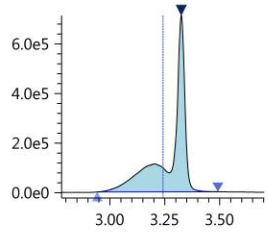
PFBA-13C_IS
Conc 5.0000
RT 3.325 Area 2889620
ISTD 216.90>172.15 (-) 7.15e5



PFBA-13C
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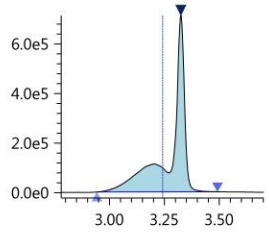
Q 216.90>172.15 (-) 7.15e5



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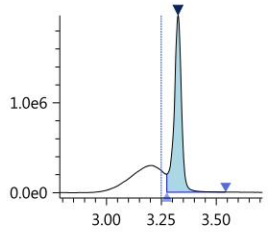
Conc 16.1418
RT 3.326 Area 4591952
Q 213.00>169.10 (-) 1.97e6



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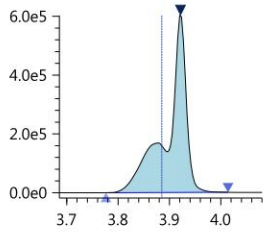
RT 3.921 Area 1562951
ISTD 267.90>223.00 (-) 6.03e5



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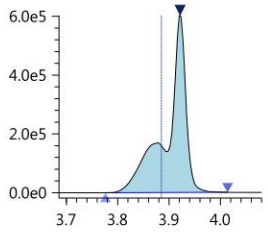
Q 267.90>223.00 (-) 6.03e5



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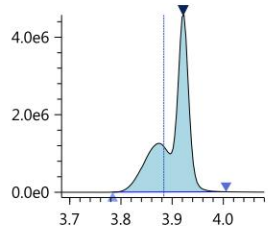

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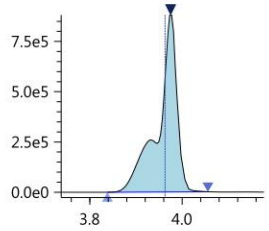
Conc 13.6805
RT 3.975 Area 2490527
Q 299.00>80.00 (-) 8.81e5



PFBS-13C
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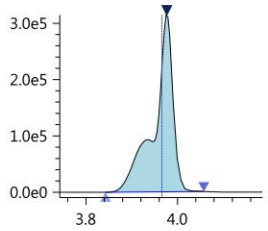
Q 301.80>80.00 (-) 3.15e5



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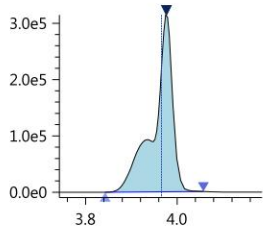

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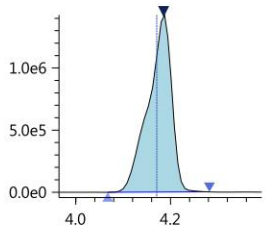

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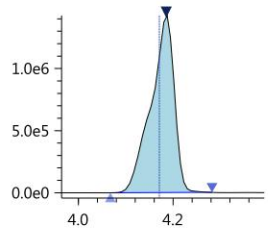
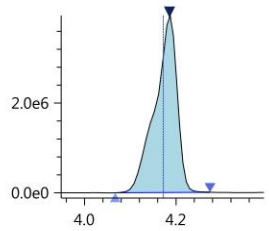
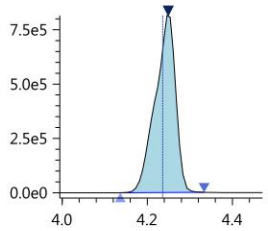
Q 314.90>270.10 (-) 1.43e6



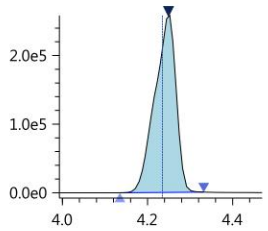
PFHxA
Conc 15.2312
RT 4.186 Area 13130962
Q 313.00>269.00 (-) 3.95e6



HPFO_DA
Conc 16.3515
RT 4.250 Area 2723023
Q 329.00>169.00 (-) 8.16e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.249 Area 898191
ISTD 332.00>286.80 (-) 2.58e5



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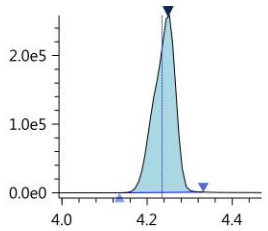

4_2-FTS-13C_IS
Conc 5.0000
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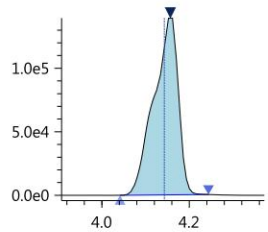
ISTD 328.80>309.05 (-) 1.40e5



4_2-FTS-13C
Conc 5.4039
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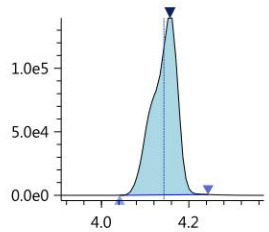
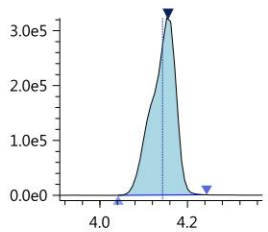
Q 328.80>309.05 (-) 1.40e5



4_2-FTS_1
Conc 13.7108
RT 4.156 Area 1224109
Q 327.00>307.05 (-) 3.23e5



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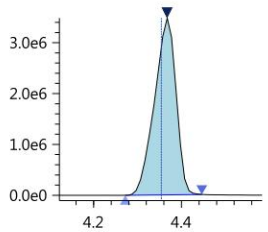
Conc 15.1254
RT 4.367 Area 11850884
Q 362.90>319.00 (-) 3.48e6



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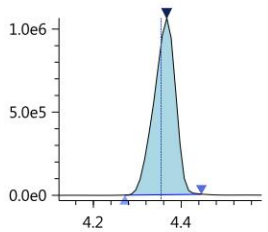
ISTD 366.90>322.10 (-) 1.07e6



Insight Report

Printed at 1/7/2019 10:13:37 AM

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Conc 5.0066
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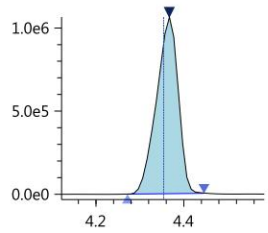
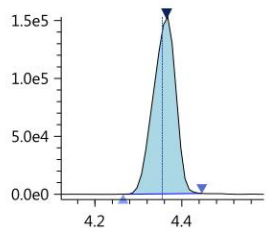
Q 366.90>322.10 (-) 1.07e6



PFHxS-18O_IS
Conc 5.0000
RT 4.365 Area 553414
ISTD 402.70>84.05 (-) 1.53e5



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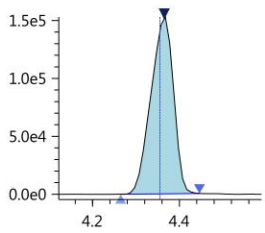
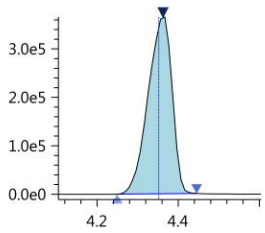
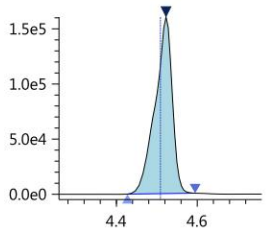
Q 402.70>84.05 (-) 1.53e5



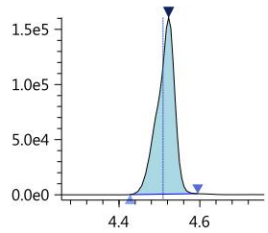
PFHxS_1
Conc 14.1977
RT 4.362 Area 1503978
Q 399.00>80.00 (-) 3.66e5



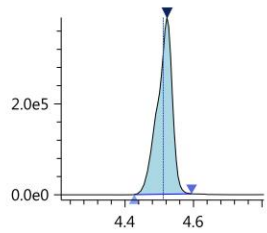
6_2-FTS-13C
Conc 4.6396
RT 4.523 Area 469786
Q 428.90>409.00 (-) 1.61e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.523 Area 469786
ISTD 428.90>409.00 (-) 1.61e5



6_2-FTS_1
Conc 13.5167
RT 4.523 Area 1173346
Q 427.00>407.00 (-) 3.90e5



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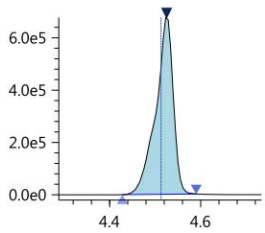
Conc 16.1207
RT 4.525 Area 1798273
Q 449.00>80.15 (-) 6.78e5



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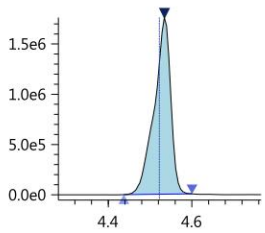
RT 4.535 Area 4787537
ISTD 416.80>372.05 (-) 1.76e6



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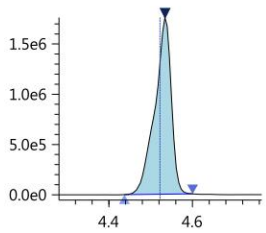

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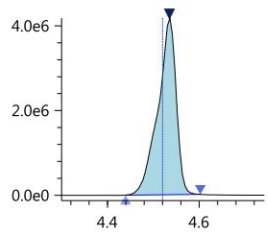
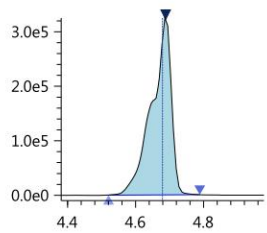
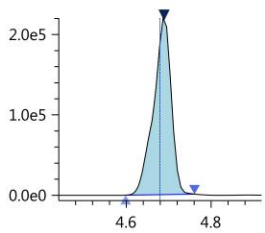
RT 4.535 Area 11460200
Q 413.00>369.00 (-) 4.18e6



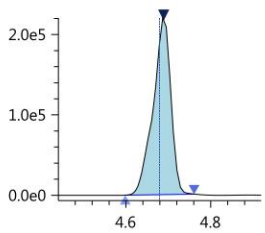
PFOS_1
Conc 14.2146
RT 4.688 Area 1300988
Q 499.00>80.00 (-) 3.25e5



PFOS-13C_IS
Conc 5.0000
RT 4.689 Area 638640
ISTD 502.80>80.05 (-) 2.21e5



PFOS-13C
Conc 5.4370
RT 4.689 Area 638640
Q 502.80>80.05 (-) 2.21e5



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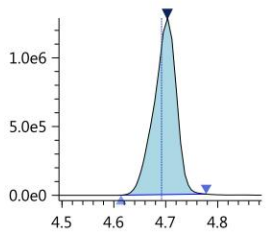
Conc 5.0000
RT 4.703 Area 3848832
ISTD 467.80>423.00 (-) 1.29e6



PFNA-13C
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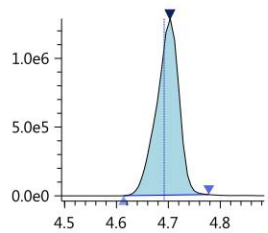
RT 4.703 Area 3848832
Q 467.80>423.00 (-) 1.29e6



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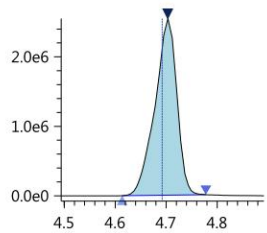
RT 4.703 Area 7565209
Q 463.00>418.90 (-) 2.55e6



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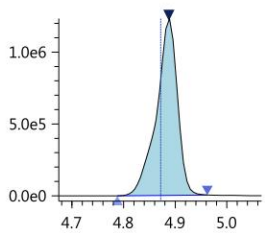
RT 4.888 Area 3451563
ISTD 514.80>469.95 (-) 1.23e6



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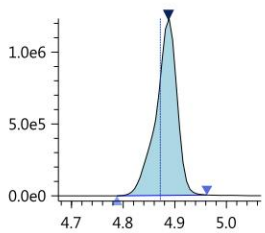
Q 514.80>469.95 (-) 1.23e6



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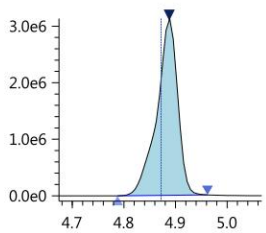
Q 513.00>468.80 (-) 3.13e6



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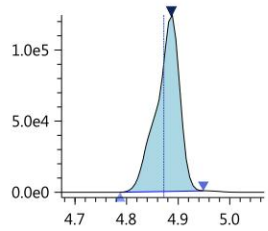
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 383818
ISTD 528.80>509.00 (-) 1.25e5



8_2-FTS-13C
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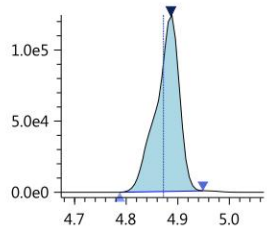

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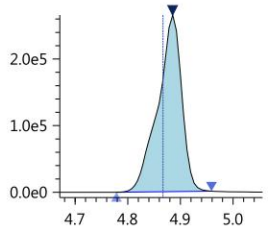
Q 527.10>506.90 (-) 2.66e5



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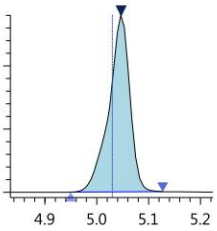

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Conc 15.1328
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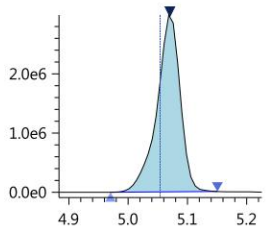
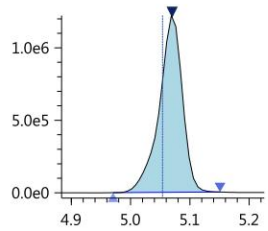
Q 563.00>518.90 (-) 3.00e6



PFUnA-13C_IS
Conc 5.0000
RT 5.070 Area 3310357
ISTD 564.80>519.95 (-) 1.22e6



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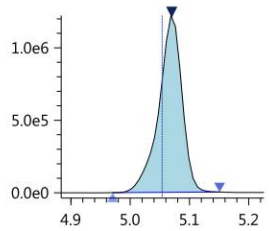

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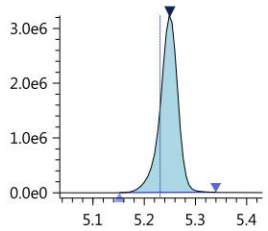
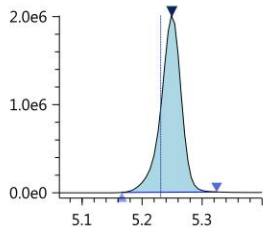
Conc 15.7747
RT 5.250 Area 7804427
Q 613.05>569.00 (-) 3.24e6



PFDoA-13C
Conc 4.9339
RT 5.250 Area 4735490
Q 614.80>569.95 (-) 2.01e6



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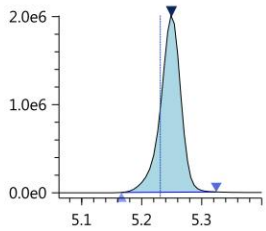

10_2-FtS_1
Conc 13.6693
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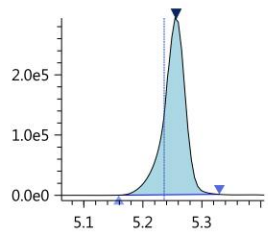
Q 627.00>606.95 (-) 2.94e5



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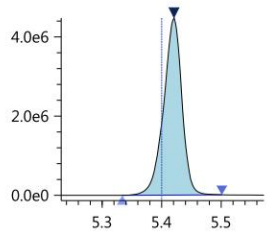

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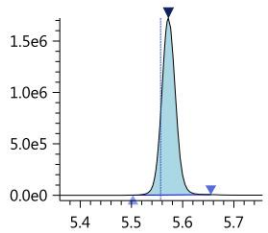
Q 713.40>669.00 (-) 1.72e6



PFTeDA-13C
Conc 5.2019
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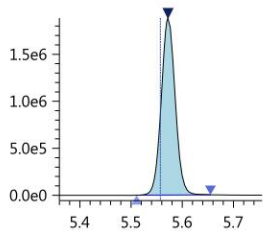
Q 714.70>669.90 (-) 1.89e6



PFTeDA-13C_IS
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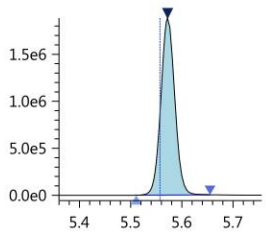

FOSA-13C_IS
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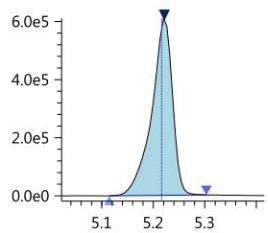
RT 5.221 Area 1698446
ISTD 506.00>78.05 (-) 6.10e5



FOSA-13C
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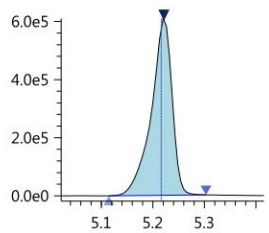
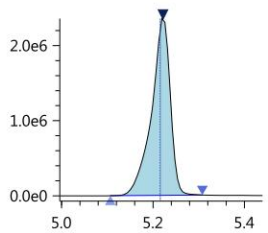
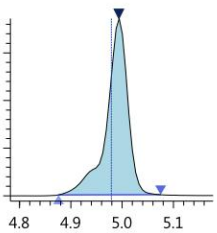


FOSA
Conc 14.7800
RT 5.222 Area 6706654
Q 498.20>78.00 (-) 2.36e6



N-MeFOSAA
Conc 16.8665
RT 4.994 Area 1047916
Q 570.20>419.00 (-) 3.72e5



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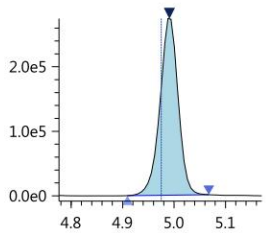
Conc 5.4848
RT 4.991 Area 678436
Q 572.80>419.05 (-) 2.75e5



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N-MeFOSAA-d3_IS
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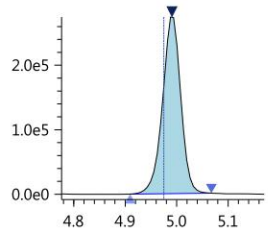

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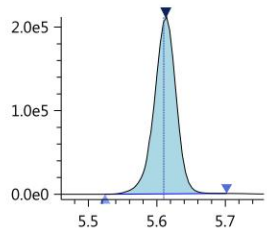
Conc 5.0000
RT 5.613 Area 474397
ISTD 514.90>168.90 (-) 2.12e5



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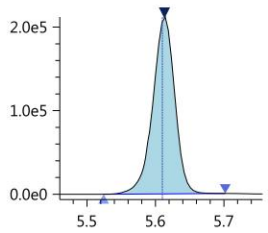
Q 514.90>168.90 (-) 2.12e5



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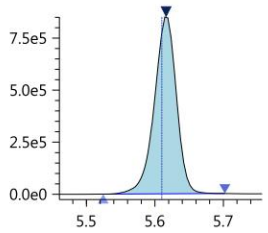
Q 512.00>169.10 (-) 8.51e5



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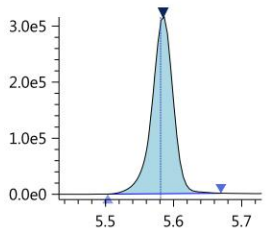
Conc 5.3284
RT 5.585 Area 688388
Q 622.70>59.10 (-) 3.16e5



N-MeFOSE-d7_IS
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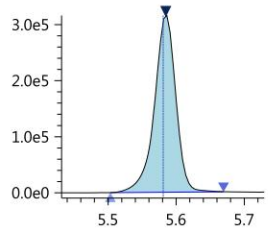
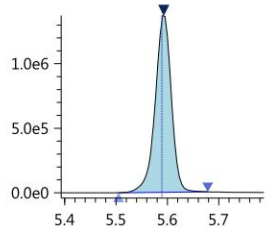
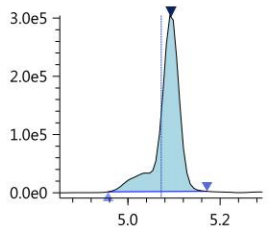
ISTD 622.70>59.10 (-) 3.16e5



N-MeFOSE
Conc 15.0147
RT 5.593 Area 3003105
Q 616.00>59.00 (-) 1.37e6



N-EtFOSAA
Conc 18.2373
RT 5.093 Area 867587
Q 584.20>418.95 (-) 3.04e5



N-EtFOSAA-d5_IS
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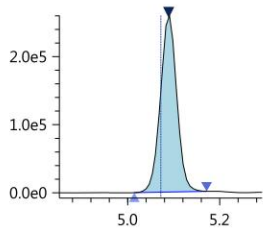
RT 5.089 Area 644223
ISTD 588.80>419.00 (-) 2.60e5



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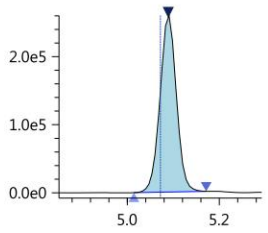

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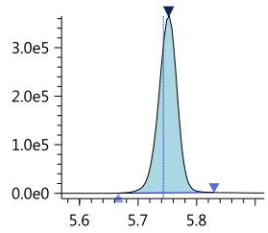

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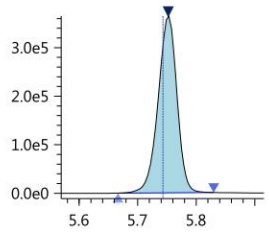
Q 530.90>169.15 (-) 3.65e5



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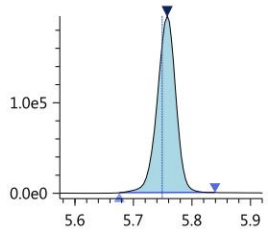
Q 526.90>169.10 (-) 1.96e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.717 Area 778943
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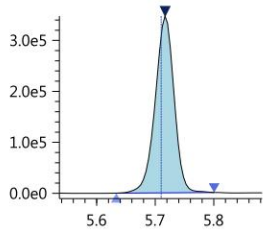

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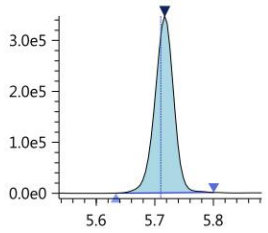
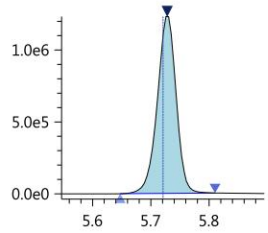
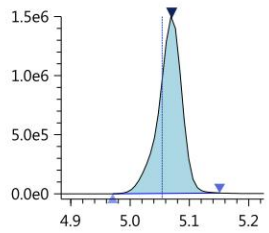
Q 638.70>59.10 (-) 3.48e5



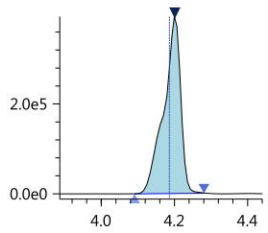
N-EtFOSE
Conc 14.6541
RT 5.728 Area 2776328
Q 630.00>58.90 (-) 1.23e6



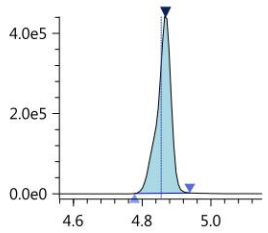
13C7-PFUnDA_IS
Conc 5.0000
RT 5.070 Area 4076344
ISTD 570.00>525.00 (-) 1.50e6



PFPeS
Conc 14.5557
RT 4.201 Area 1255815
Q 349.00>99.00 (-) 3.95e5



PFNS
Conc 16.1951
RT 4.868 Area 1214006
Q 549.00>99.00 (-) 4.42e5



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_023

Sample ID: IB
Date acquired: 1/4/2019 6:19:22 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_023.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.325	3399241	3399241	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.325	3399241	4955262	26	5.3460	ng/mL	----
PFBA	ND(W/B)	----	----	3399241	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.919	1814851	1814851	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.919	1814851	4955262	26	5.1219	ng/mL	----
PFPeA	Auto	3.919	85318	1814851	4	0.0135	ng/mL	----
PFBS_1	M	3.974	259	1067054	16	0.0012	ng/mL	----
PFBS-13C	Auto	3.975	1067054	4955262	26	5.3809	ng/mL	----
PFBS-13C_IS	Auto	3.975	1067054	1067054	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.183	6018866	6018866	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.183	6018866	4955262	26	5.0869	ng/mL	----
PFHxA	Auto	4.185	10967	6018866	6	0.0082	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1024852	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.248	1024852	1024852	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.248	1024852	4955262	26	4.8625	ng/mL	----
4_2-FTS-13C_IS	Auto	4.155	702166	702166	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.155	702166	4955262	26	5.7679	ng/mL	----
4_2-FTS_1	Auto	4.143	188	702166	5	0.0015	ng/mL	----
PFHpA	M	4.369	4176	3835430	8	0.0043	ng/mL	----
PFHpA-13C_IS	Auto	4.364	3835430	3835430	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.364	3835430	4955262	26	4.3212	ng/mL	----
PFHxS-18O_IS	Auto	4.361	592757	592757	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.361	592757	4955262	26	4.3327	ng/mL	----
PFHxS_1	Auto	4.367	1669	592757	7	0.0146	ng/mL	----
6_2-FTS-13C	Auto	4.523	655388	4955262	26	5.3246	ng/mL	----
6_2-FTS-13C_IS	Auto	4.523	655388	655388	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.525	339	655388	10	0.0028	ng/mL	----
PFHpS_1	M	4.512	128	592757	7	0.0011	ng/mL	----
PFOA-13C_IS	Auto	4.532	5980002	5980002	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.532	5980002	4955262	26	5.0544	ng/mL	----
PFOA	Auto	4.533	10758	5980002	9	0.0103	ng/mL	----
PFOS_1	Auto	4.687	355	732889	13	0.0033	ng/mL	----
PFOS-13C_IS	Auto	4.687	732889	732889	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.687	732889	4955262	26	5.1327	ng/mL	----
PFNA-13C_IS	Auto	4.700	4808601	4808601	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.700	4808601	4955262	26	4.8846	ng/mL	----
PFNA	Auto	4.691	1360	4808601	11	0.0051	ng/mL	----
PFDA-13C_IS	Auto	4.886	4374262	4374262	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.886	4374262	4955262	26	5.0900	ng/mL	----
PFDA	M	4.846	1360	4374262	12	0.0019	ng/mL	----
8_2-FTS-13C_IS	Auto	4.884	505094	505094	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.884	505094	4955262	26	5.2766	ng/mL	----
8_2-FTS_1	M	4.882	226	505094	15	0.0025	ng/mL	----
PFDS_1	ND(W/B)	----	----	732889	13	----	ng/mL	----
PFUnA	Auto	5.069	10160	3925769	14	0.0157	ng/mL	----
PFUnA-13C_IS	Auto	5.069	3925769	3925769	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.069	3925769	4955262	26	4.8822	ng/mL	----
PFDoA	Auto	5.245	2569	5988987	17	0.0136	ng/mL	----
PFDoA-13C	Auto	5.249	5988987	4955262	26	5.1332	ng/mL	----
PFDoA-13C_IS	Auto	5.249	5988987	5988987	17	5.0000	ng/mL	----
10_2-FtS_1	M	5.254	100	505094	15	0.0014	ng/mL	----
PFTrDA	Auto	5.421	4317	4275548	22	0.0036	ng/mL	----
PFTeDA	Auto	5.572	33438	4275548	22	0.0161	ng/mL	----
PFTeDA-13C	Auto	5.572	4275548	4955262	26	5.1214	ng/mL	----
PFTeDA-13C_IS	Auto	5.572	4275548	4275548	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.221	1763003	1763003	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.221	1763003	4955262	26	4.6404	ng/mL	----
FOSA	M	5.218	3786	1763003	18	0.0080	ng/mL	----
N-MeFOSAA	M	4.993	2852	746293	19	0.0365	ng/mL	----
N-MeFOSAA-d3	Auto	4.990	746293	4955262	26	4.9632	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.990	746293	746293	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.613	472744	472744	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.613	472744	4955262	26	4.3727	ng/mL	----
N-MeFOSA	M	5.614	739	472744	1	0.0059	ng/mL	----
N-MeFOSE-d7	Auto	5.584	673132	4955262	26	4.2861	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.584	673132	673132	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	673132	20	----	ng/mL	----

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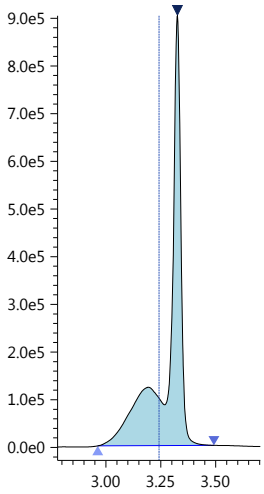
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.090	2190	742991	21	0.0609	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.088	742991	742991	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.088	742991	4955262	26	5.1469	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.751	797354	797354	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.751	797354	4955262	26	4.3984	ng/mL	----
N-EtFOSA	M	5.752	131	797354	23	0.0046	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.717	736001	736001	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.717	736001	4955262	26	4.3423	ng/mL	----
N-EtFOSE	M	5.732	498	736001	24	0.0028	ng/mL	----
13C7-PFUnDA_IS	Auto	5.069	4955262	4955262	26	5.0000	ng/mL	----
PFPeS	M	4.169	48	1067054	16	0.0005	ng/mL	----
PFNS	ND(W/B)	----	----	732889	13	----	ng/mL	----

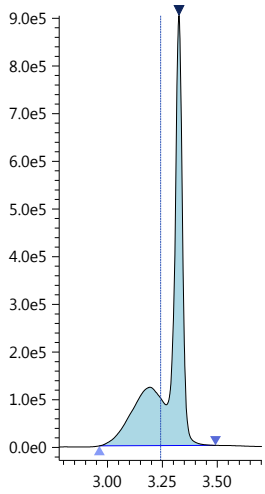
PFBA-13C_IS

Conc 5.0000
RT 3.325 Area 3399241
ISTD 216.90>172.15 (-) 9.05e5



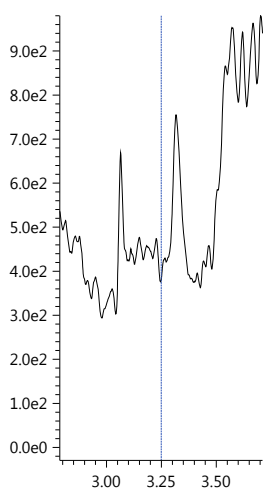
PFBA-13C

Conc 5.3460
RT 3.325 Area 3399241
Q 216.90>172.15 (-) 9.05e5



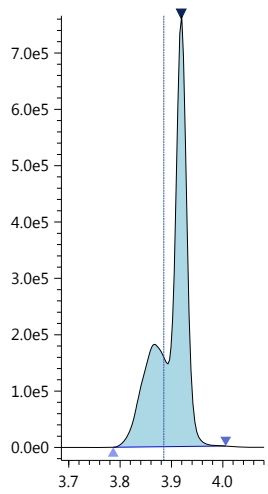
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 9.80e2



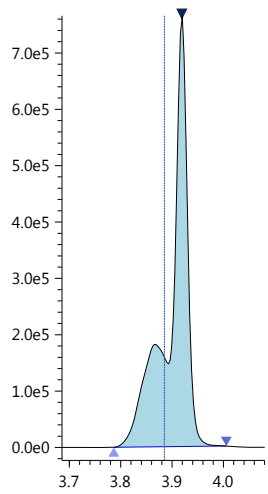
PFPeA-13C_IS

Conc 5.0000
RT 3.919 Area 1814851
ISTD 267.90>223.00 (-) 7.66e5



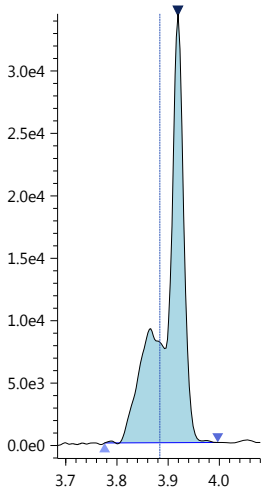
PFPeA-13C

Conc 5.1219
RT 3.919 Area 1814851
Q 267.90>223.00 (-) 7.66e5



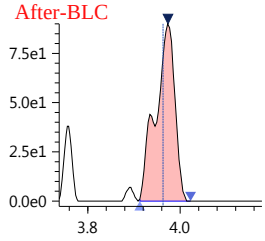
PFPeA

Conc 0.0135
RT 3.919 Area 85318
Q 263.05>219.10 (-) 3.46e4

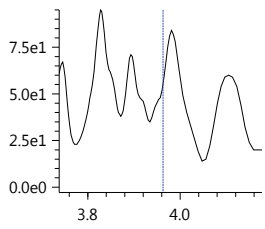


PFBS_1

Conc 0.0012
RT 3.974 Area 259
R#1 38.78 (0.00)
Q 299.00>80.00 (-) 9.00e1

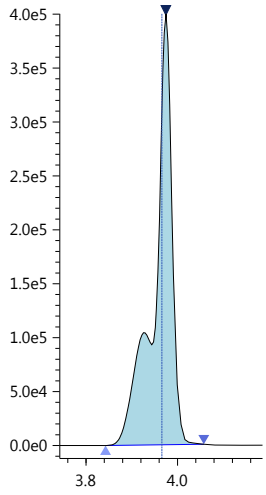


R1 298.80>99.00 (-) 9.50e1



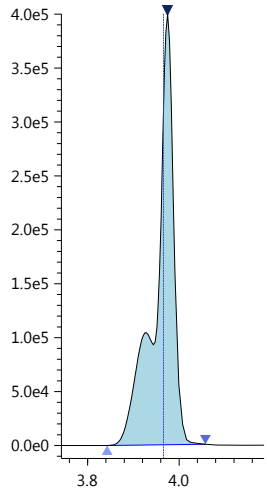
PFBS-13C

Conc 5.3809
RT 3.975 Area 1067054
Q 301.80>80.00 (-) 4.00e5



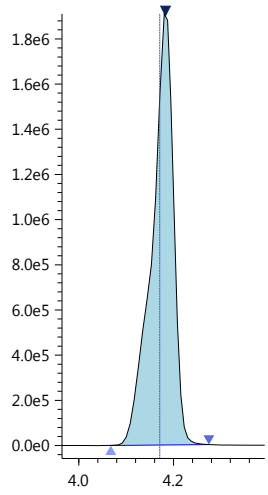
PFBS-13C_IS

Conc 5.0000
RT 3.975 Area 1067054
ISTD 301.80>80.00 (-) 4.00e5



PFHxA-13C_IS

Conc 5.0000
RT 4.183 Area 6018866
ISTD 314.90>270.10 (-) 1.91e6



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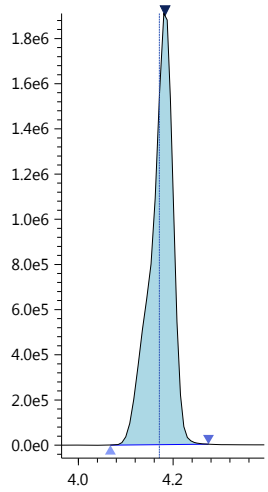
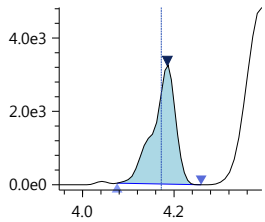
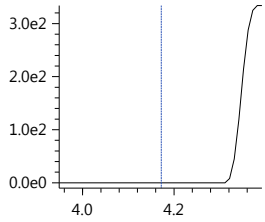
PFHxA-13C
Conc 5.0869
RT 4.183 Area 6018866
Q 314.90>270.10 (-) 1.91e6



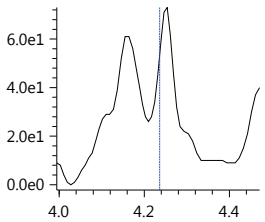
PFHxA
Conc 0.0082
RT 4.185 Area 10967
R#1 0.00 (0.00)
Q 313.00>269.00 (-) 4.83e3



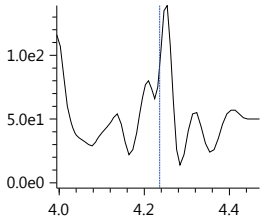
R1 313.00>119.10 (-) 3.34e2



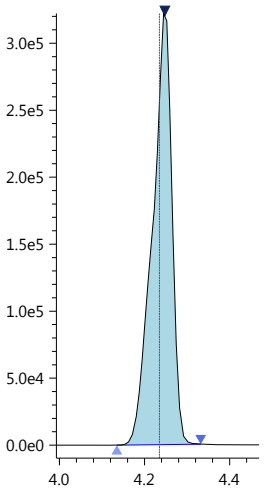
HPFO_DA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 329.00>169.00 (-) 7.30e1



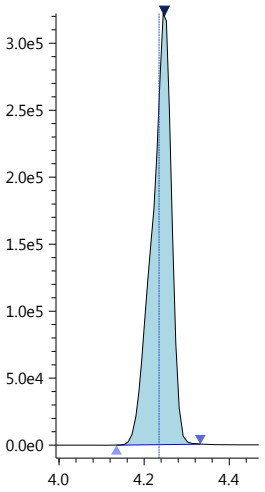
R1 329.00>285.10 (-) 1.39e2



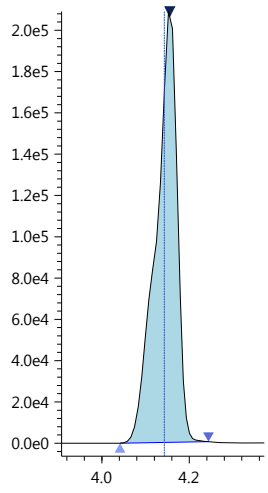
HFPO_DA-13C_IS
Conc 5.0000
RT 4.248 Area 1024852
ISTD 332.00>286.80 (-) 3.22e5



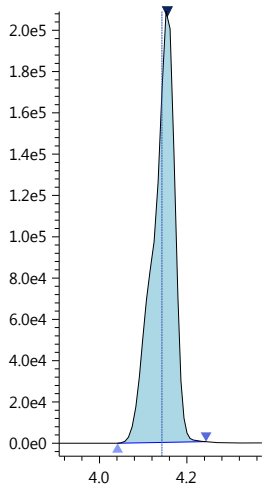
HFPO_DA-13C
Conc 4.8625
RT 4.248 Area 1024852
Q 332.00>286.80 (-) 3.22e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 702166
ISTD 328.80>309.05 (-) 2.09e5



4_2-FTS-13C
Conc 5.7679
RT 4.155 Area 702166
Q 328.80>309.05 (-) 2.09e5



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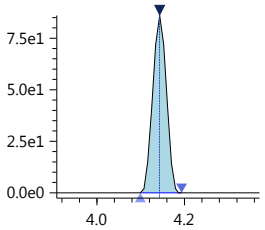
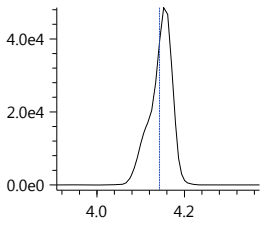
Conc 0.0015
RT 4.143 Area 188
R#1 39420.48 (0.00)
Q 327.00>307.05 (-) 8.60e1

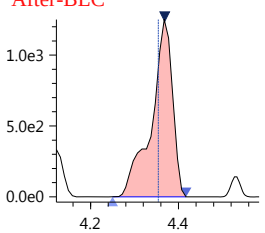


R1 327.00>81.10 (-) 4.86e4

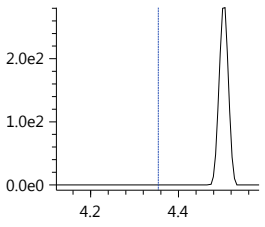


PFHpA
Conc 0.0043
RT 4.369 Area 4176
R#1 0.00 (0.00)
Q 362.90>319.00 (-) 1.25e3

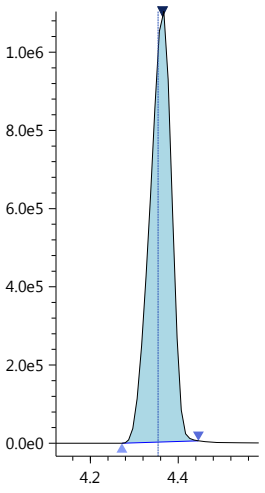
After-BLC



R1 362.90>169.00 (-) 2.81e2



PFHpA-13C_IS
Conc 5.0000
RT 4.364 Area 3835430
ISTD 366.90>322.10 (-) 1.10e6



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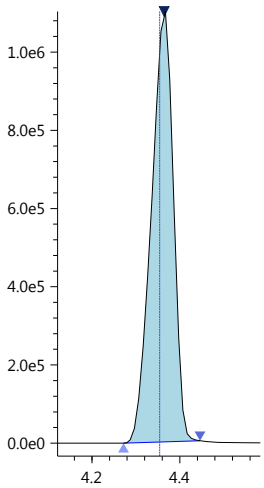
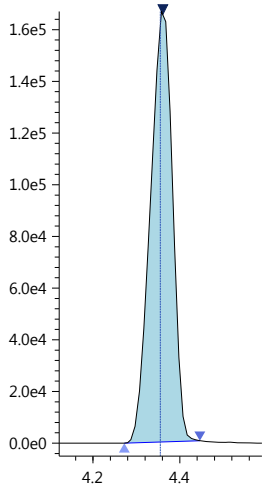
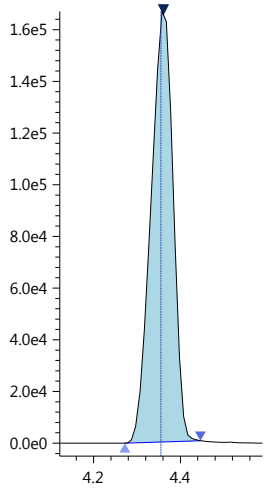
PFHpA-13C
Conc 4.3212
RT 4.364 Area 3835430
Q 366.90>322.10 (-) 1.10e6



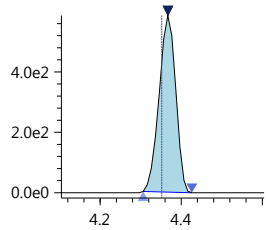
PFHxS-18O_IS
Conc 5.0000
RT 4.361 Area 592757
ISTD 402.70>84.05 (-) 1.67e5



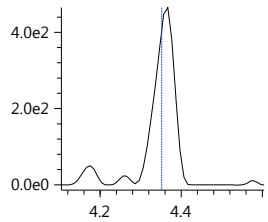
PFHxS-18O
Conc 4.3327
RT 4.361 Area 592757
Q 402.70>84.05 (-) 1.67e5



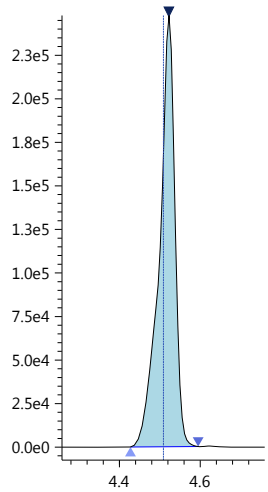
PFHxS_1
Conc 0.0146
RT 4.367 Area 1669
R#1 75.96 (0.00)
Q 399.00>80.00 (-) 5.87e2



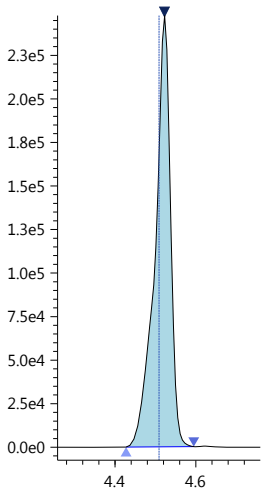
R1 399.00>99.00 (-) 4.65e2



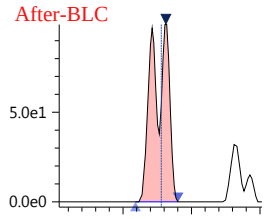
6_2-FTS-13C
Conc 5.3246
RT 4.523 Area 655388
Q 428.90>409.00 (-) 2.48e5



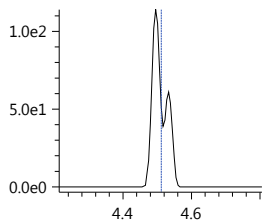
6_2-FTS-13C_IS
Conc 5.0000
RT 4.523 Area 655388
ISTD 428.90>409.00 (-) 2.48e5



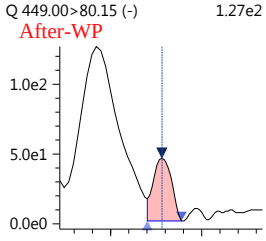
6_2-FTS_1
Conc 0.0028
RT 4.525 Area 339
R#1 37.62 (0.00)
Q 427.00>407.00 (-) 9.90e1



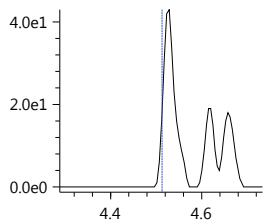
R1 427.00>80.90 (-) 1.14e2



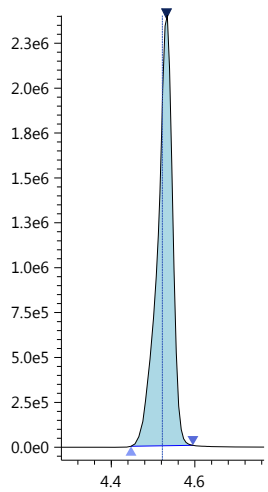
PFHpS_1
Conc 0.0011
RT 4.512 Area 128
R#1 26.32 (0.00)
Q 449.00>80.15 (-) 1.27e2



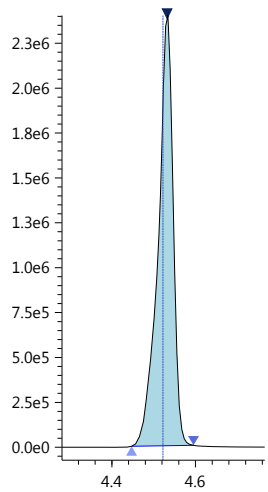
R1 449.00>99.20 (-) 4.30e1



PFOA-13C_IS
Conc 5.0000
RT 4.532 Area 5980002
ISTD 416.80>372.05 (-) 2.40e6



PFOA-13C
Conc 5.0544
RT 4.532 Area 5980002
Q 416.80>372.05 (-) 2.40e6



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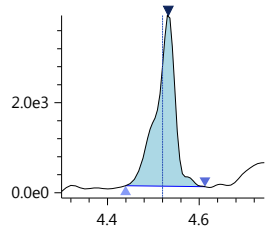
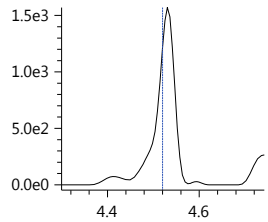
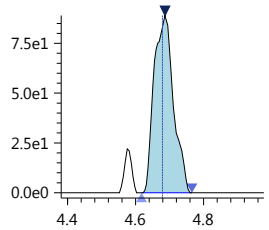
PFOA
Conc 0.0103
RT 4.533 Area 10758
R#1 38.53 (0.00)
Q 413.00>369.00 (-) 3.94e3



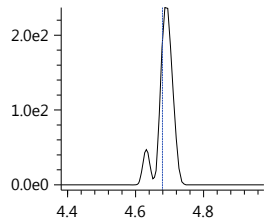
R1 413.00>169.10 (-) 1.57e3



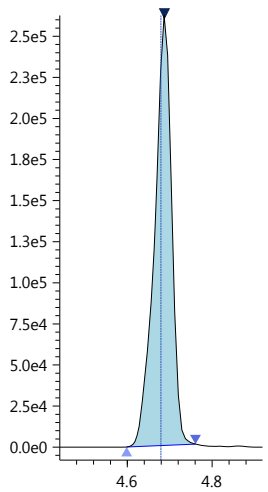
PFOS_1
Conc 0.0033
RT 4.687 Area 355
R#1 263.64 (0.00)
Q 499.00>80.00 (-) 8.90e1



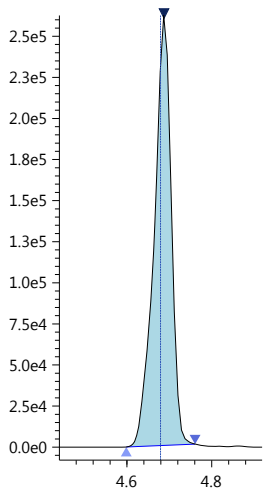
R1 499.00>99.00 (-) 2.37e2



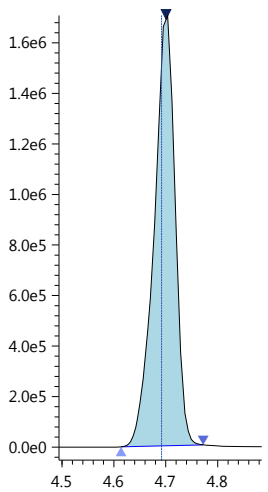
PFOS-13C_IS
Conc 5.0000
RT 4.687 Area 732889
ISTD 502.80>80.05 (-) 2.63e5



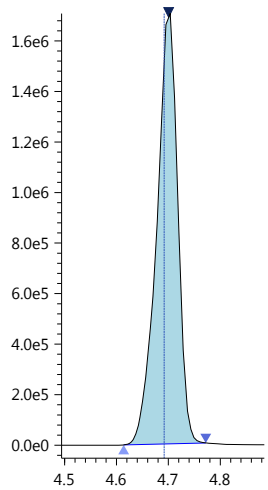
PFOS-13C
Conc 5.1327
RT 4.687 Area 732889
Q 502.80>80.05 (-) 2.63e5



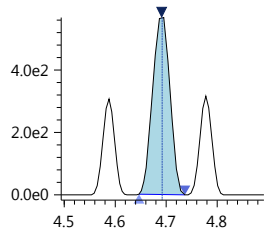
PFNA-13C_IS
Conc 5.0000
RT 4.700 Area 4808601
ISTD 467.80>423.00 (-) 1.71e6



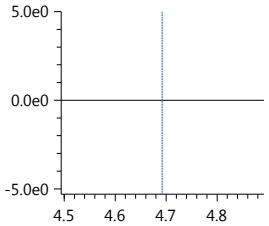
PFNA-13C
Conc 4.8846
RT 4.700 Area 4808601
Q 467.80>423.00 (-) 1.71e6



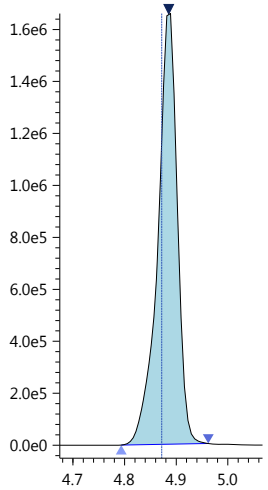
PFNA
Conc 0.0051
RT 4.691 Area 1360
R#1 0.00 (0.00)
Q 463.00>418.90 (-) 5.68e2



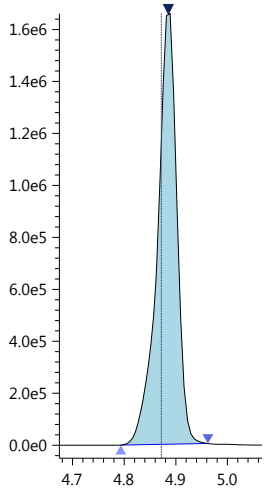
R1 463.00>219.00 (-) 0.00e0



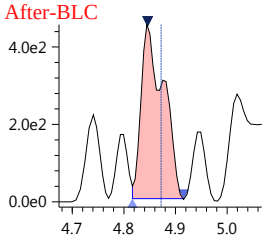
PFDA-13C_IS
Conc 5.0000
RT 4.886 Area 4374262
ISTD 514.80>469.95 (-) 1.66e6



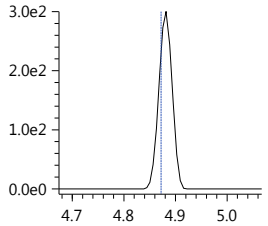
PFDA-13C
Conc 5.0900
RT 4.886 Area 4374262
Q 514.80>469.95 (-) 1.66e6



PFDA
Conc 0.0019
RT 4.846 Area 1360
R#1 1.55 (0.00)
Q 513.00>468.80 (-) 4.58e2
After-BLC



R1 513.00>219.10 (-) 3.00e2



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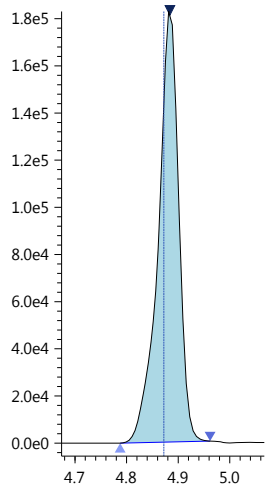
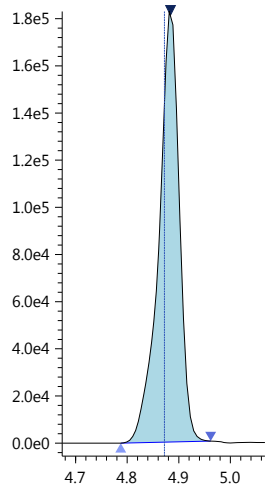
8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 505094
ISTD 528.80>509.00 (-) 1.83e5

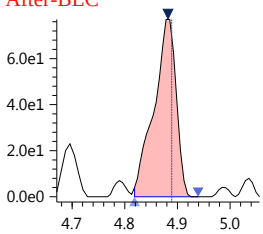


8_2-FTS-13C
Conc 5.2766
RT 4.884 Area 505094
Q 528.80>509.00 (-) 1.83e5

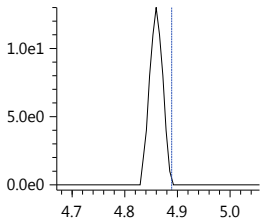


8_2-FTS_1
Conc 0.0025
RT 4.882 Area 226
R#1 5.06 (0.00)
Q 527.10>506.90 (-) 7.70e1

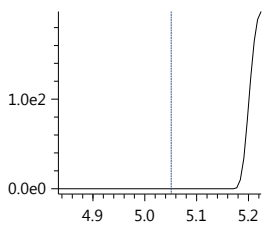
After-BLC



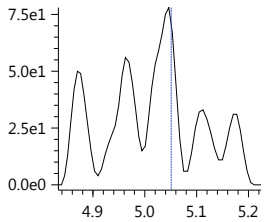
R1 527.20>487.00 (-) 1.30e1



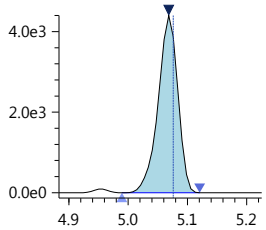
PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 599.00>79.90 (-) 1.98e2



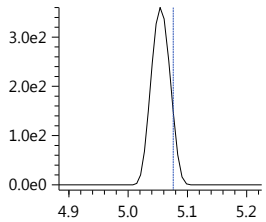
R1 599.00>99.10 (-) 7.80e1



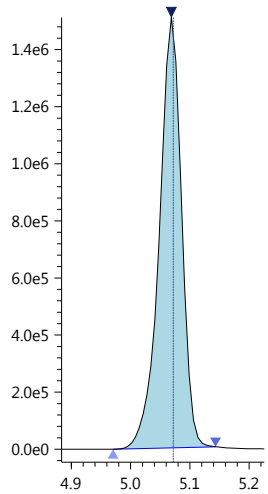
PFUnA
Conc 0.0157
RT 5.069 Area 10160
R#1 6.04 (0.00)
Q 563.00>518.90 (-) 4.40e3



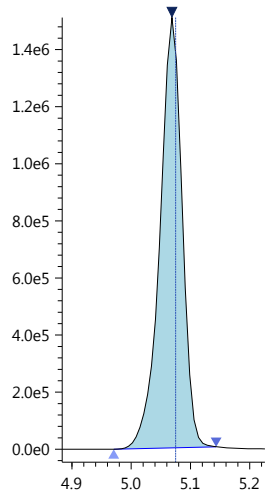
R1 563.00>219.00 (-) 3.60e2



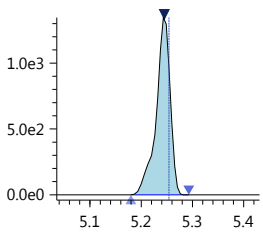
PFUnA-13C_IS
Conc 5.0000
RT 5.069 Area 3925769
ISTD 564.80>519.95 (-) 1.51e6



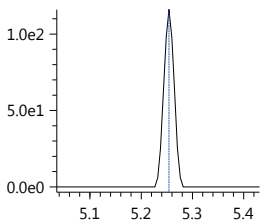
PFUnA-13C
Conc 4.8822
RT 5.069 Area 3925769
Q 564.80>519.95 (-) 1.51e6



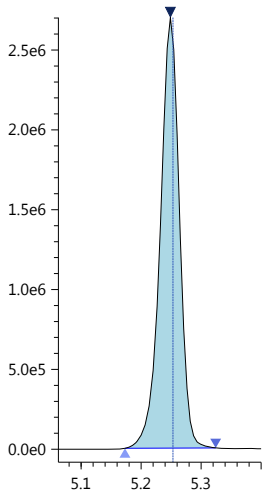
PFDoA
Conc 0.0136
RT 5.245 Area 2569
R#1 3.78 (0.00)
Q 613.05>569.00 (-) 1.35e3



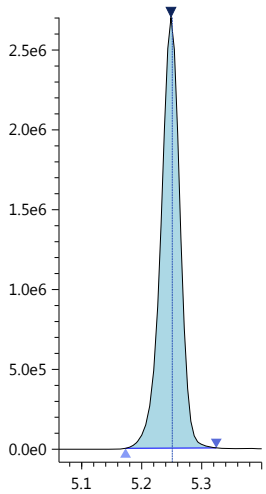
R1 613.05>169.00 (-) 1.16e2



PFDoA-13C
Conc 5.1332
RT 5.249 Area 5988987
Q 614.80>569.95 (-) 2.70e6



PFDoA-13C_IS
Conc 5.0000
RT 5.249 Area 5988987
ISTD 614.80>569.95 (-) 2.70e6



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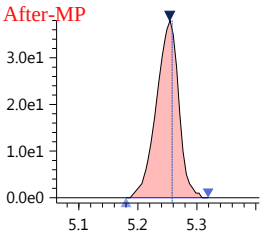
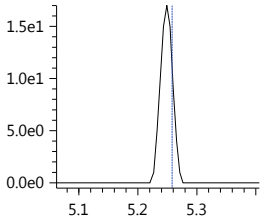
10_2-FtS_1

Conc 0.0014
RT 5.254 Area 100
R#1 40.00 (0.00)

Q 627.00>606.95 (-) 3.80e1



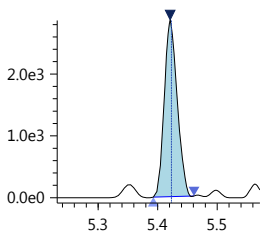
R1 627.00>81.25 (-) 1.70e1



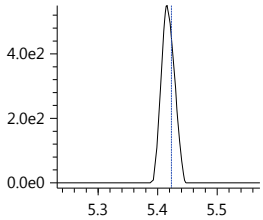
PFTrDA

Conc 0.0036
RT 5.421 Area 4317
R#1 5.85 (0.00)

Q 663.00>618.90 (-) 2.87e3



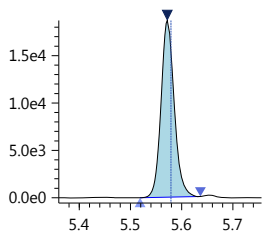
R1 662.90>169.00 (-) 5.50e2



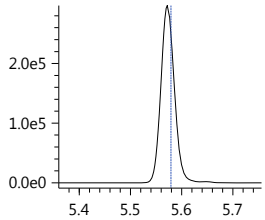
PFTeDA

Conc 0.0161
RT 5.572 Area 33438
R#1 1537.14 (0.00)

Q 713.40>669.00 (-) 1.87e4



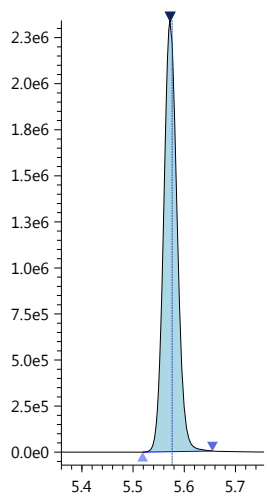
R1 713.40>169.10 (-) 2.97e5



PFTeDA-13C

Conc 5.1214
RT 5.572 Area 4275548

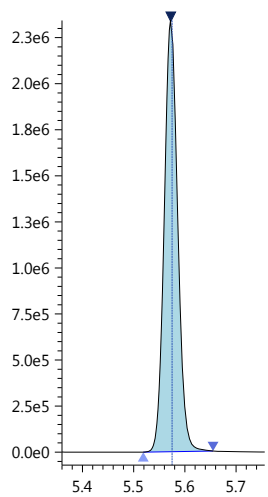
Q 714.70>669.90 (-) 2.34e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.572 Area 4275548

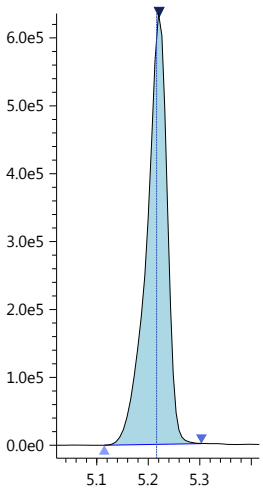
ISTD 714.70>669.90 (-) 2.34e6



FOSA-13C_IS

Conc 5.0000
RT 5.221 Area 1763003

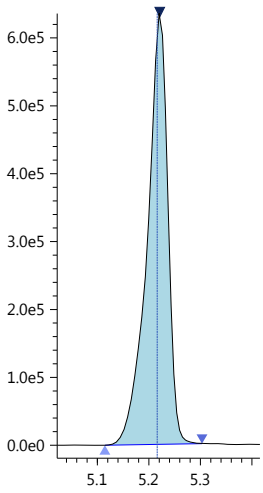
ISTD 506.00>78.05 (-) 6.36e5



FOSA-13C

Conc 4.6404
RT 5.221 Area 1763003

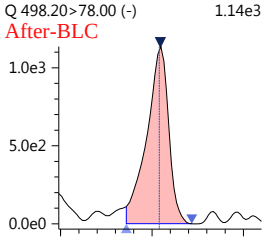
Q 506.00>78.05 (-) 6.36e5



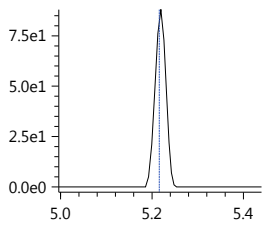
FOSA

Conc 0.0080
RT 5.218 Area 3786
R#1 8.41 (0.00)

Q 498.20>78.00 (-) 1.14e3



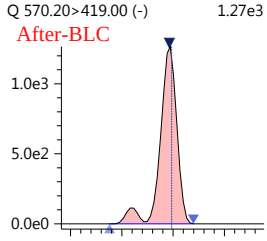
R1 498.20>64.10 (-) 8.80e1



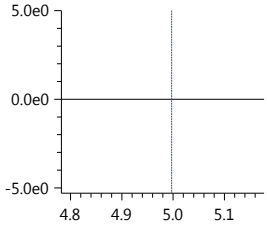
N-MeFOSAA

Conc 0.0365
RT 4.993 Area 2852
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 1.27e3



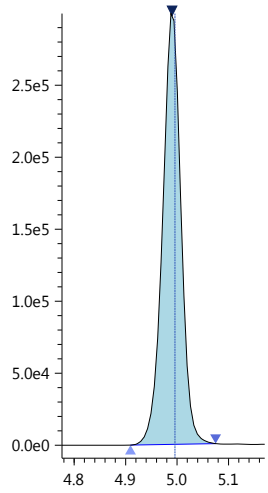
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 4.9632
RT 4.990 Area 746293

Q 572.80>419.05 (-) 3.00e5



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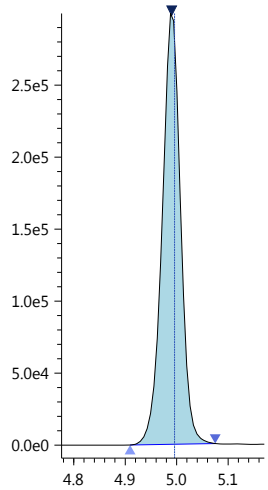
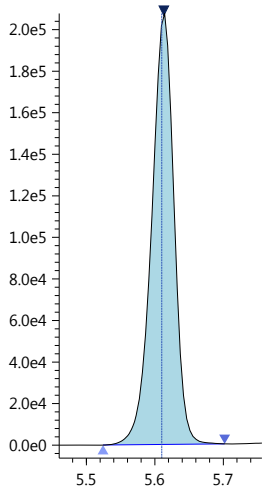
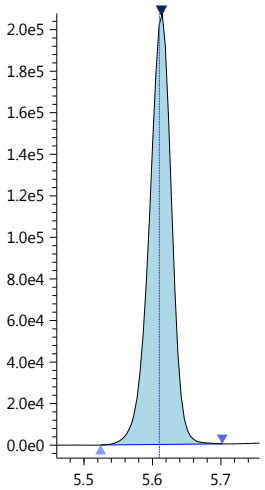
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.990 Area 746293
ISTD 572.80>419.05 (-) 3.00e5



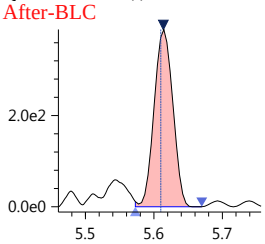
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.613 Area 472744
ISTD 514.90>168.90 (-) 2.08e5



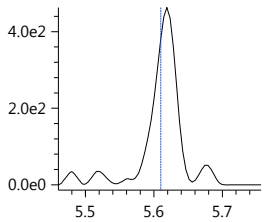
N-MeFOSA-d3
Conc 4.3727
RT 5.613 Area 472744
Q 514.90>168.90 (-) 2.08e5



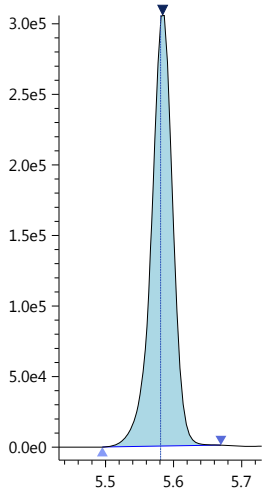
N-MeFOSA
Conc 0.0059
RT 5.614 Area 739
R#1 106.09 (0.00)
Q 512.00>169.10 (-) 3.89e2
After-BLC



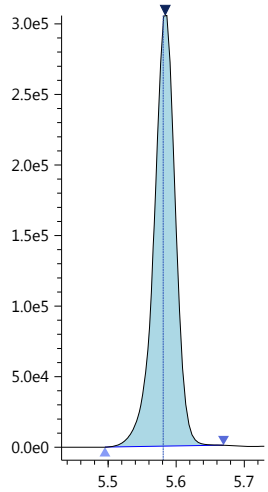
R1 512.00>219.00 (-) 4.63e2



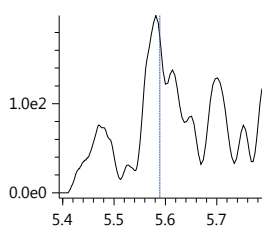
N-MeFOSE-d7
Conc 4.2861
RT 5.584 Area 673132
Q 622.70>59.10 (-) 3.06e5



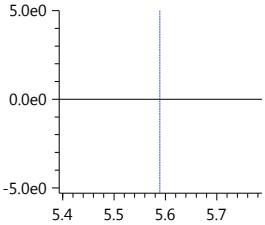
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.584 Area 673132
ISTD 622.70>59.10 (-) 3.06e5



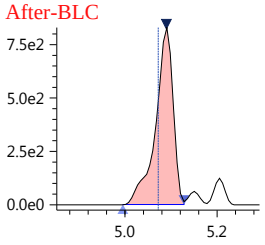
N-MeFOSE
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 616.00>59.00 (-) 1.99e2



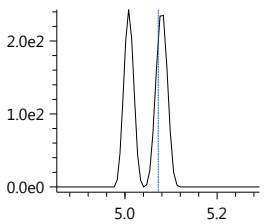
R1 556.00>121.20 (-) 0.00e0



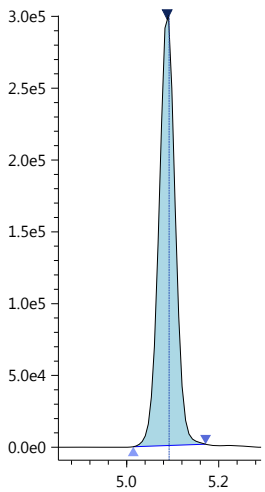
N-EtFOSAA
Conc 0.0609
RT 5.090 Area 2190
R#1 15.84 (0.00)
Q 584.20>418.95 (-) 8.30e2
After-BLC



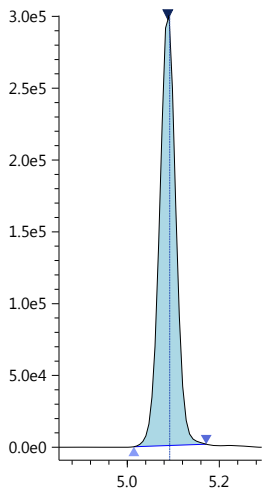
R1 584.20>526.10 (-) 2.43e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.088 Area 742991
ISTD 588.80>419.00 (-) 3.01e5



N-EtFOSAA-d5
Conc 5.1469
RT 5.088 Area 742991
Q 588.80>419.00 (-) 3.01e5



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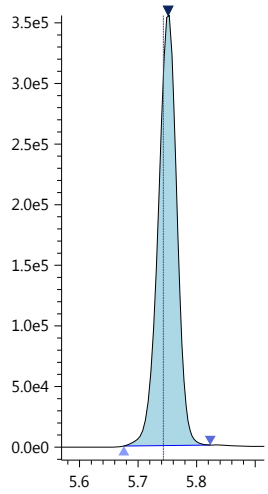
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.751 Area 797354

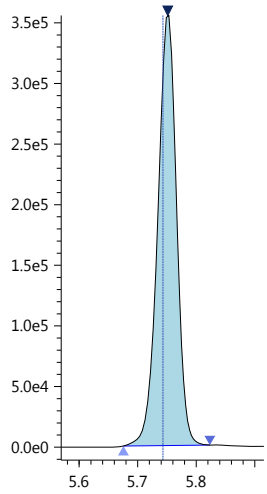
ISTD 530.90>169.15 (-) 3.56e5



N-EtFOSA-d9

Conc 4.3984
RT 5.751 Area 797354

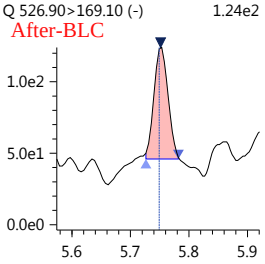
Q 530.90>169.15 (-) 3.56e5



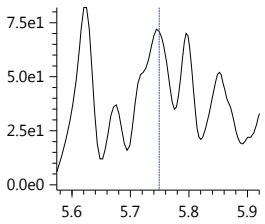
N-EtFOSA

Conc 0.0046
RT 5.752 Area 131
R#1 31.11 (0.00)

Q 526.90>169.10 (-) 1.24e2



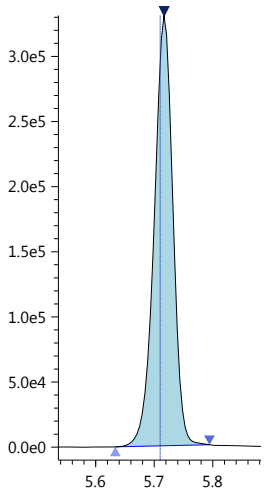
R1 526.90>219.00 (-) 8.20e1



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.717 Area 736001

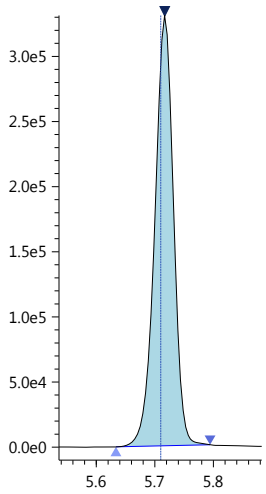
ISTD 638.70>59.10 (-) 3.31e5



N-EtFOSE-d9

Conc 4.3423
RT 5.717 Area 736001

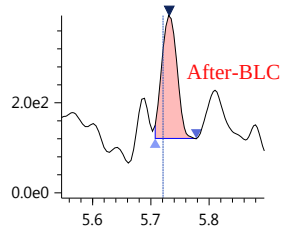
Q 638.70>59.10 (-) 3.31e5



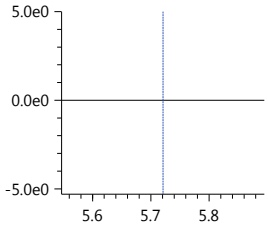
N-EtFOSE

Conc 0.0028
RT 5.732 Area 498
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 3.94e2



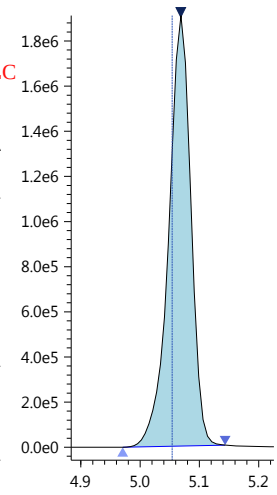
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.069 Area 4955262

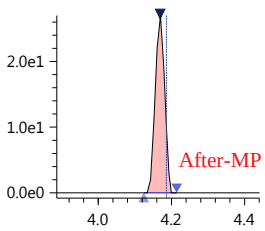
ISTD 570.00>525.00 (-) 1.91e6



PFPeS

Conc 0.0005
RT 4.169 Area 48
R#1 0.00 (0.00)

Q 349.00>99.00 (-) 2.70e1



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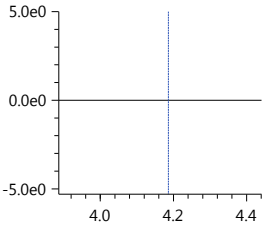
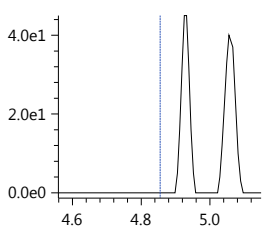


PFNS

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

Q 549.00>99.00 (-) 4.50e1



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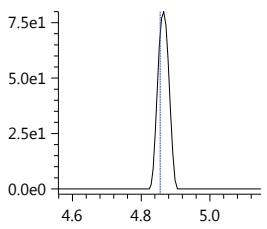

Insight Report

Printed at 1/7/2019 10:13:37 AM

010419_023

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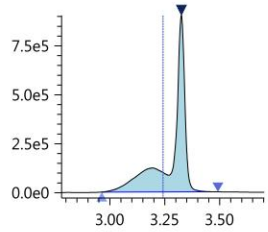
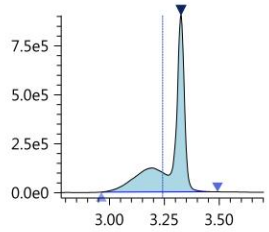
Date acquired: 1/4/2019 6:19:22 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_023.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

PFBA-13C_IS
Conc 5.0000
RT 3.325 Area 3399241
ISTD 216.90>172.15 (-) 9.05e5



PFBA-13C
Conc 5.3460
RT 3.325 Area 3399241
Q 216.90>172.15 (-) 9.05e5



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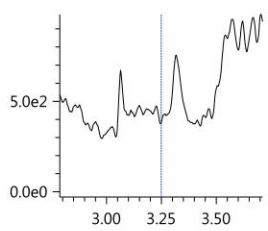
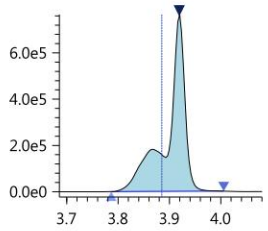
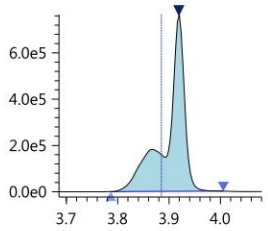
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 9.80e2



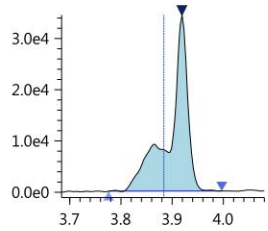
PFPeA-13C_IS
Conc 5.0000
RT 3.919 Area 1814851
ISTD 267.90>223.00 (-) 7.66e5



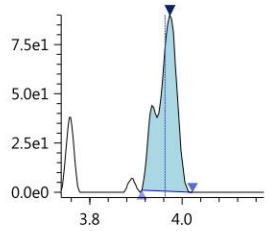
PFPeA-13C
Conc 5.1219
RT 3.919 Area 1814851
Q 267.90>223.00 (-) 7.66e5



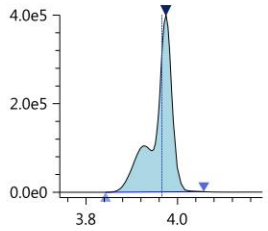
PFPeA
Conc 0.0687
RT 3.919 Area 85318
Q 263.05>219.10 (-) 3.46e4



PFBS_1
Conc 0.0012
RT 3.974 Area 256
Q 299.00>80.00 (-) 9.00e1



PFBS-13C
Conc 5.3809
RT 3.975 Area 1067054
Q 301.80>80.00 (-) 4.00e5



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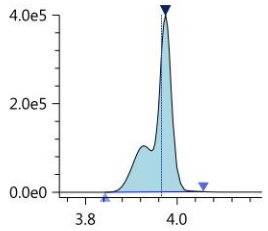
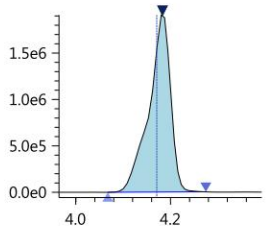
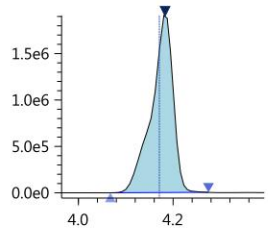
Conc 5.0000
RT 3.975 Area 1067054
ISTD 301.80>80.00 (-) 4.00e5



PFHxA-13C_IS
Conc 5.0000
RT 4.183 Area 6018866
ISTD 314.90>270.10 (-) 1.91e6



PFHxA-13C
Conc 5.0869
RT 4.183 Area 6018866
Q 314.90>270.10 (-) 1.91e6



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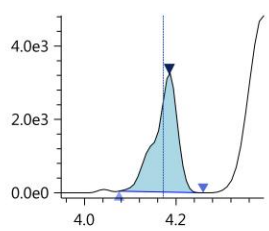
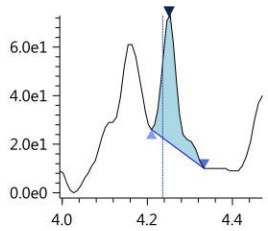
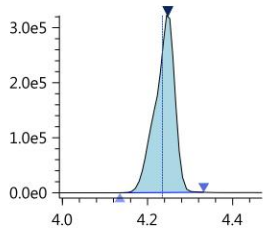
Conc 0.0102
RT 4.185 Area 10967
Q 313.00>269.00 (-) 4.83e3



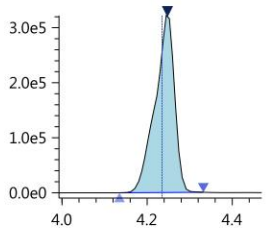
HPFO_DA
Conc 0.0007
RT 4.251 Area 131
Q 329.00>169.00 (-) 7.30e1



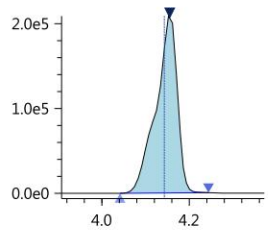
HFPO_DA-13C_IS
Conc 5.0000
RT 4.248 Area 1024852
ISTD 332.00>286.80 (-) 3.22e5



HFPO_DA-13C
Conc 4.8625
RT 4.248 Area 1024852
Q 332.00>286.80 (-) 3.22e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 702166
ISTD 328.80>309.05 (-) 2.09e5



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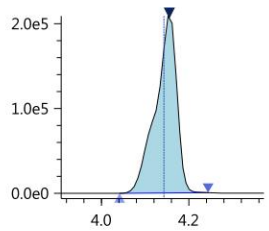
Conc 5.7679
RT 4.155 Area 702166
Q 328.80>309.05 (-) 2.09e5



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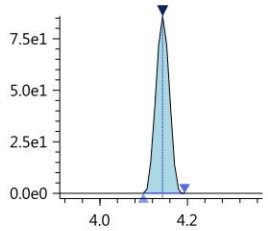
Conc 0.0016
RT 4.143 Area 188
Q 327.00>307.05 (-) 8.60e1



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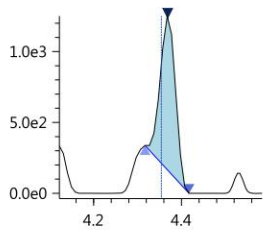
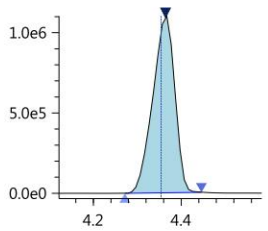
RT 4.369 Area 2609
Q 362.90>319.00 (-) 1.25e3



PFHpA-13C_IS
Conc 5.0000
RT 4.364 Area 3835430
ISTD 366.90>322.10 (-) 1.10e6



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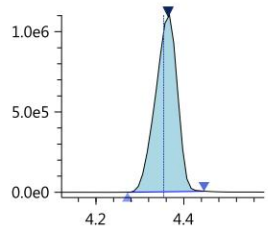
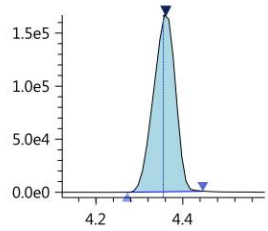
PFHpA-13C
Conc 4.3212
RT 4.364 Area 3835430
Q 366.90>322.10 (-) 1.10e6



PFHxS-18O_IS
Conc 5.0000
RT 4.361 Area 592757
ISTD 402.70>84.05 (-) 1.67e5



PFHxS-18O
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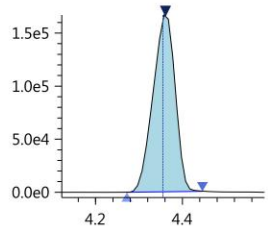
RT 4.361 Area 592757
Q 402.70>84.05 (-) 1.67e5



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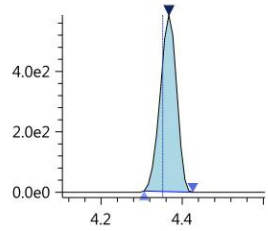
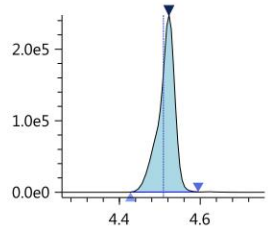
Conc 0.0147
RT 4.367 Area 1669
Q 399.00>80.00 (-) 5.87e2



6_2-FTS-13C
Conc 5.3246
RT 4.523 Area 655388
Q 428.90>409.00 (-) 2.48e5



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Conc 5.0000
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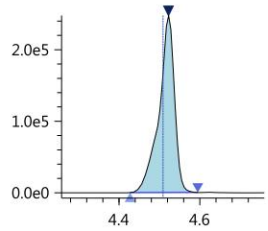
ISTD 428.90>409.00 (-) 2.48e5



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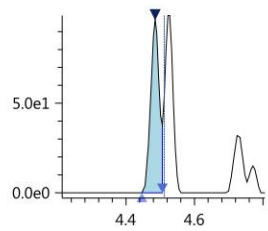
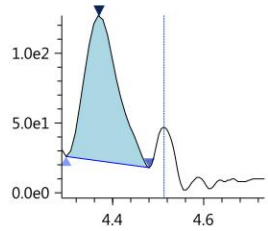
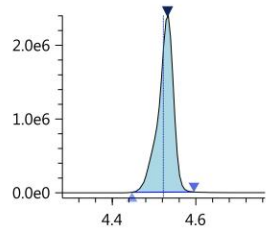
Conc 0.0014
RT 4.485 Area 171
Q 427.00>407.00 (-) 9.90e1



PFHpS_1
Conc 0.0044
RT 4.370 Area 531
Q 449.00>80.15 (-) 1.27e2



PFOA-13C_IS
Conc 5.0000
RT 4.532 Area 5980002
ISTD 416.80>372.05 (-) 2.40e6



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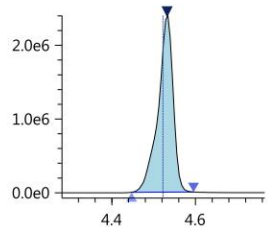
RT 4.532 Area 5980002
Q 416.80>372.05 (-) 2.40e6



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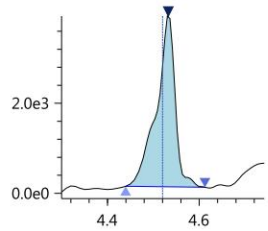
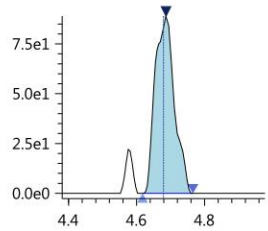
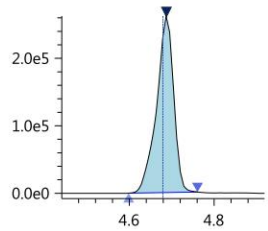
Q 413.00>369.00 (-) 3.94e3



PFOS_1
Conc 0.0034
RT 4.687 Area 355
Q 499.00>80.00 (-) 8.90e1



PFOS-13C_IS
Conc 5.0000
RT 4.687 Area 732889
ISTD 502.80>80.05 (-) 2.63e5



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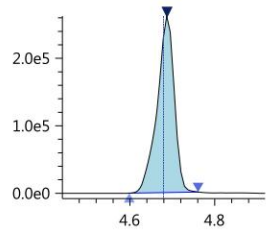
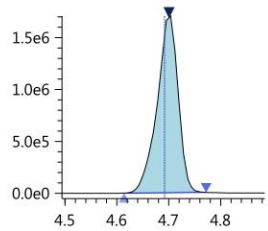
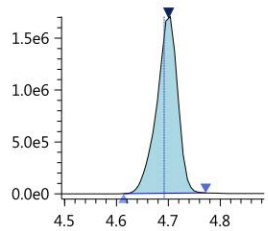
RT 4.687 Area 732889
Q 502.80>80.05 (-) 2.63e5



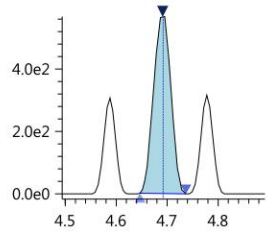
PFNA-13C_IS
Conc 5.0000
RT 4.700 Area 4808601
ISTD 467.80>423.00 (-) 1.71e6



PFNA-13C
Conc 4.8846
RT 4.700 Area 4808601
Q 467.80>423.00 (-) 1.71e6



PFNA
Conc 0.0022
RT 4.691 Area 1360
Q 463.00>418.90 (-) 5.68e2



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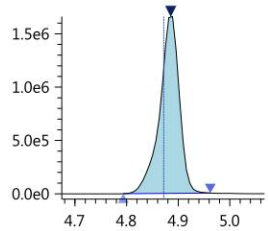
ISTD 514.80>469.95 (-) 1.66e6



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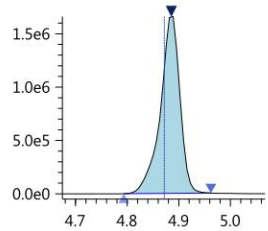
RT 4.886 Area 4374262
Q 514.80>469.95 (-) 1.66e6



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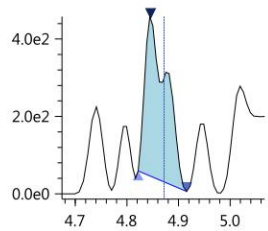
Q 513.00>468.80 (-) 4.58e2



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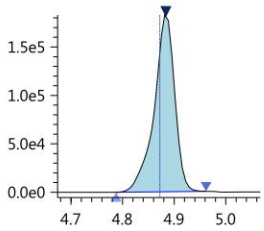
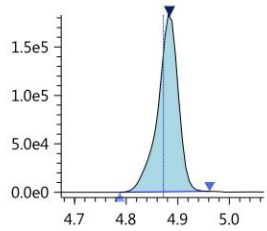
8_2-FTS-13C_IS
Conc 5.0000
RT 4.884 Area 505094
ISTD 528.80>509.00 (-) 1.83e5



8_2-FTS-13C
Conc 5.2766
RT 4.884 Area 505094
Q 528.80>509.00 (-) 1.83e5



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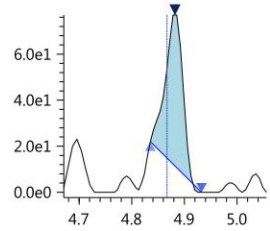
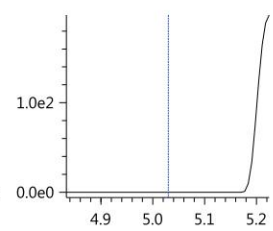
Conc 0.0017
RT 4.882 Area 150
Q 527.10>506.90 (-) 7.70e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.98e2



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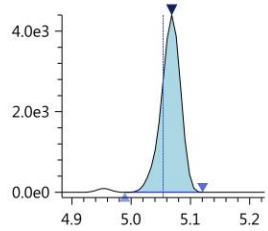
Conc 0.0160
RT 5.069 Area 10160
Q 563.00>518.90 (-) 4.40e3



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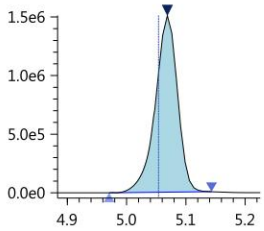
Conc 5.0000
RT 5.069 Area 3925769
ISTD 564.80>519.95 (-) 1.51e6



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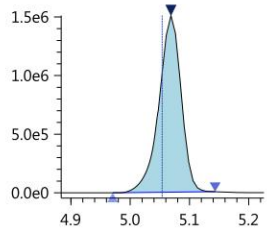
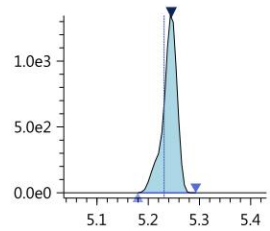
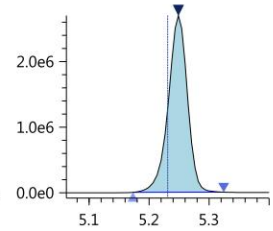
Conc 4.8822
RT 5.069 Area 3925769
Q 564.80>519.95 (-) 1.51e6



PFDoA
Conc 0.0041
RT 5.245 Area 2569
Q 613.05>569.00 (-) 1.35e3



PFDoA-13C
Conc 5.1332
RT 5.249 Area 5988987
Q 614.80>569.95 (-) 2.70e6



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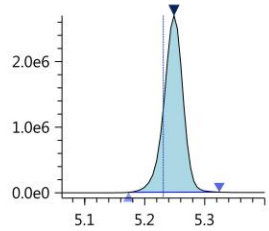
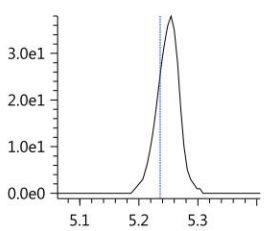
RT 5.249 Area 5988987
ISTD 614.80>569.95 (-) 2.70e6



10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 3.80e1



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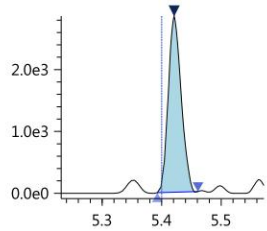
Conc 0.0056
RT 5.421 Area 4317
Q 663.00>618.90 (-) 2.87e3



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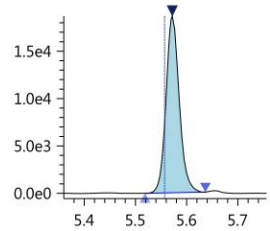
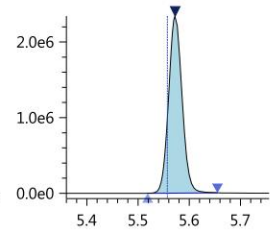
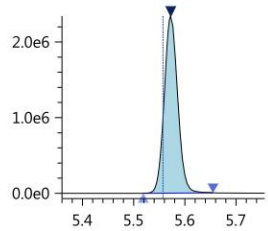
Conc 0.0832
RT 5.572 Area 33438
Q 713.40>669.00 (-) 1.87e4



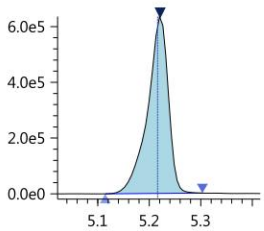
PFTeDA-13C
Conc 5.1214
RT 5.572 Area 4275548
Q 714.70>669.90 (-) 2.34e6



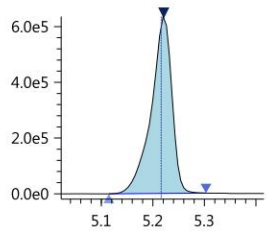
PFTeDA-13C_IS
Conc 5.0000
RT 5.572 Area 4275548
ISTD 714.70>669.90 (-) 2.34e6



FOSA-13C_IS
Conc 5.0000
RT 5.221 Area 1763003
ISTD 506.00>78.05 (-) 6.36e5



FOSA-13C
Conc 4.6404
RT 5.221 Area 1763003
Q 506.00>78.05 (-) 6.36e5



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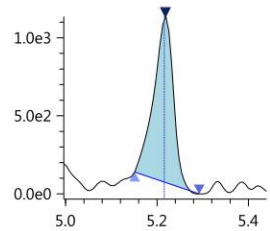
Conc 0.0067
RT 5.218 Area 3151
Q 498.20>78.00 (-) 1.14e3



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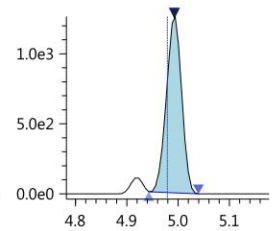
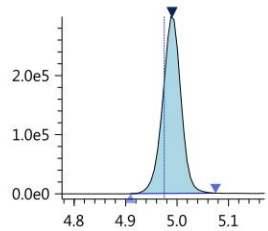
Conc 0.0382
RT 4.993 Area 2613
Q 570.20>419.00 (-) 1.27e3



N-MeFOSAA-d3
Conc 4.9632
RT 4.990 Area 746293
Q 572.80>419.05 (-) 3.00e5



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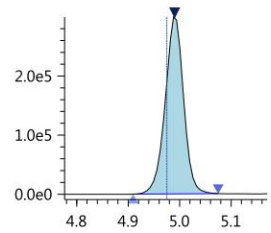
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.990 Area 746293
ISTD 572.80>419.05 (-) 3.00e5



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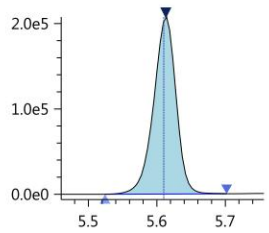
Conc 5.0000
RT 5.613 Area 472744
ISTD 514.90>168.90 (-) 2.08e5



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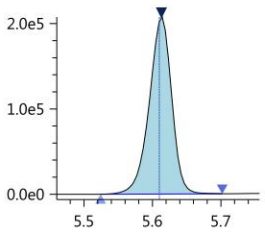
Conc 4.3727
RT 5.613 Area 472744
Q 514.90>168.90 (-) 2.08e5



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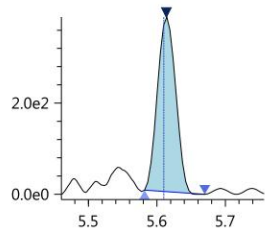
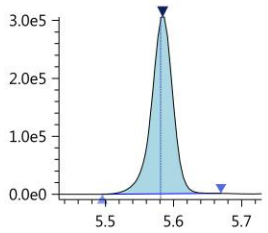
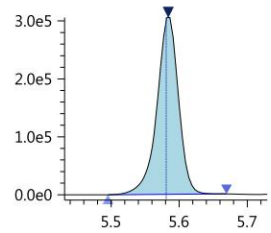
Conc 0.0057
RT 5.614 Area 711
Q 512.00>169.10 (-) 3.89e2



N-MeFOSE-d7
Conc 4.2861
RT 5.584 Area 673132
Q 622.70>59.10 (-) 3.06e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.584 Area 673132
ISTD 622.70>59.10 (-) 3.06e5



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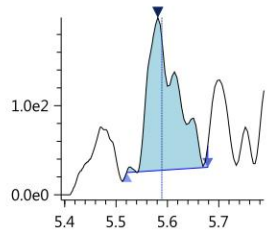
Conc 0.0034
RT 5.581 Area 657
Q 616.00>59.00 (-) 1.99e2



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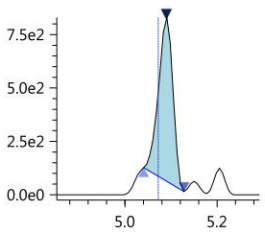
RT 5.090 Area 1678
Q 584.20>418.95 (-) 8.30e2



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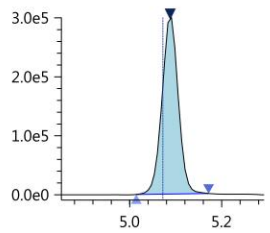
RT 5.088 Area 742991
ISTD 588.80>419.00 (-) 3.01e5



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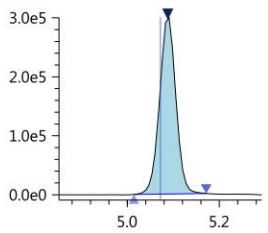

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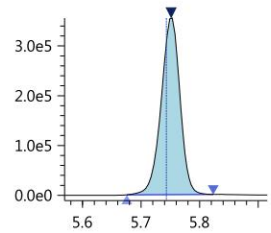
RT 5.751 Area 797354
ISTD 530.90>169.15 (-) 3.56e5



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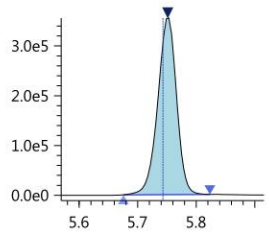
Conc 4.3984
RT 5.751 Area 797354
Q 530.90>169.15 (-) 3.56e5



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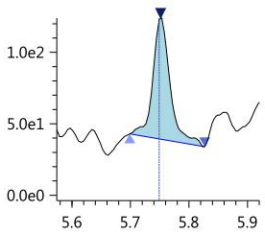
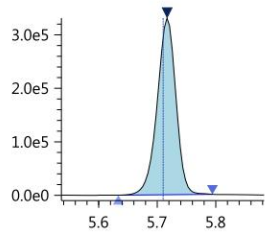
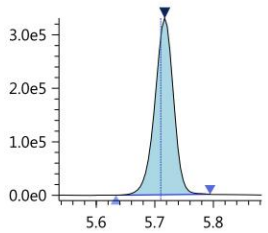
Conc 0.0063
RT 5.752 Area 174
Q 526.90>169.10 (-) 1.24e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.717 Area 736001
ISTD 638.70>59.10 (-) 3.31e5



N-EtFOSE-d9
Conc 4.3423
RT 5.717 Area 736001
Q 638.70>59.10 (-) 3.31e5



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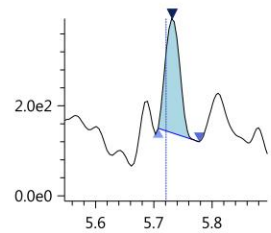
RT 5.732 Area 439
Q 630.00>58.90 (-) 3.94e2



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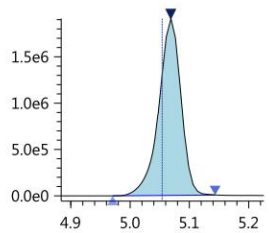
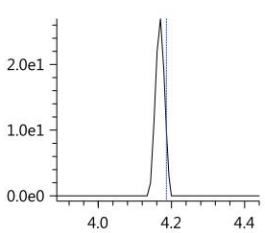
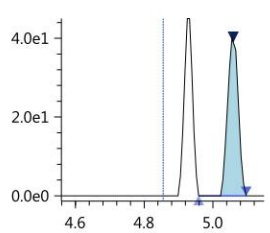
Conc 5.0000
RT 5.069 Area 4955262
ISTD 570.00>525.00 (-) 1.91e6



PFPeS
Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 2.70e1



PFNS
Conc 0.0010
RT 5.059 Area 87
Q 549.00>99.00 (-) 4.50e1



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_024

Sample ID: 1.0 PPB ICV
Date acquired: 1/4/2019 6:29:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_024.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.322	2924671	2924671	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.322	2924671	4739368	26	4.8092	ng/mL	5.0000
PFBA	M	3.323	483340	2924671	2	0.9369	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.917	1627466	1627466	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.917	1627466	4739368	26	4.8023	ng/mL	5.0000
PFPeA	Auto	3.917	795555	1627466	4	0.9186	ng/mL	1.0000
PFBS_1	Auto	3.971	169430	907207	16	0.9168	ng/mL	0.8874
PFBS-13C	Auto	3.972	907207	4739368	26	4.7832	ng/mL	5.0000
PFBS-13C_IS	Auto	3.972	907207	907207	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.182	5889200	5889200	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.182	5889200	4739368	26	5.2040	ng/mL	5.0000
PFHxA	Auto	4.181	955056	5889200	6	0.9178	ng/mL	1.0000
HPFO_DA	Auto	4.247	196955	1011855	3	1.0498	ng/mL	1.0000
HFPO_DA-13C_IS	Auto	4.247	1011855	1011855	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.247	1011855	4739368	26	5.0195	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.154	630441	630441	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.154	630441	4739368	26	5.4147	ng/mL	5.0000
4_2-FTS_1	Auto	4.154	104645	630441	5	0.9599	ng/mL	0.9372
PFHpA	Auto	4.360	708350	3624285	8	0.9145	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.361	3624285	3624285	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.361	3624285	4739368	26	4.2693	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.360	597775	597775	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.360	597775	4739368	26	4.5684	ng/mL	5.0000
PFHxS_1	Auto	4.355	102280	597775	7	0.8880	ng/mL	0.9131
6_2-FTS-13C	Auto	4.521	573143	4739368	26	4.8685	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.521	573143	573143	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.522	111072	573143	10	1.0488	ng/mL	0.9512
PFHpS_1	Auto	4.523	126430	597775	7	1.0493	ng/mL	0.9534
PFOA-13C_IS	Auto	4.531	5478702	5478702	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.531	5478702	4739368	26	4.8417	ng/mL	5.0000
PFOA	Auto	4.531	868007	5478702	9	0.9657	ng/mL	1.0000
PFOS_1	Auto	4.684	79625	605840	13	0.8912	ng/mL	0.9292
PFOS-13C_IS	Auto	4.686	605840	605840	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.686	605840	4739368	26	4.4362	ng/mL	5.0000
PFNA-13C_IS	Auto	4.699	4635469	4635469	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.699	4635469	4739368	26	4.9233	ng/mL	5.0000
PFNA	Auto	4.699	537429	4635469	11	0.8733	ng/mL	1.0000
PFDA-13C_IS	Auto	4.884	4178189	4178189	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.884	4178189	4739368	26	5.0833	ng/mL	5.0000
PFDA	Auto	4.884	679305	4178189	12	0.9711	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.881	439430	439430	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.881	439430	4739368	26	4.7997	ng/mL	5.0000
8_2-FTS_1	Auto	4.881	80111	439430	15	1.0342	ng/mL	0.9600
PFDS_1	Auto	5.044	111383	605840	13	0.9999	ng/mL	0.9647
PFUnA	Auto	5.067	596164	3799021	14	0.9709	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.067	3799021	3799021	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.067	3799021	4739368	26	4.9398	ng/mL	5.0000
PFDoA	Auto	5.246	603189	5868366	17	0.9483	ng/mL	1.0000
PFDoA-13C	Auto	5.246	5868366	4739368	26	5.2589	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.246	5868366	5868366	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.252	67572	439430	15	1.0753	ng/mL	0.9662
PFTrDA	Auto	5.416	713779	4152306	22	0.9569	ng/mL	1.0000
PFTeDA	Auto	5.570	275155	4152306	22	0.9670	ng/mL	1.0000
PFTeDA-13C	Auto	5.570	4152306	4739368	26	5.2003	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.570	4152306	4152306	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.218	1774335	1774335	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.218	1774335	4739368	26	4.8830	ng/mL	5.0000
FOSA	Auto	5.219	477149	1774335	18	1.0066	ng/mL	1.0000
N-MeFOSAA	Auto	4.990	87743	739313	19	1.1321	ng/mL	1.0000
N-MeFOSAA-d3	Auto	4.988	739313	4739368	26	5.1408	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.988	739313	739313	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.611	486260	486260	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.611	486260	4739368	26	4.7026	ng/mL	5.0000
N-MeFOSA	Auto	5.614	128583	486260	1	1.0014	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.582	714658	4739368	26	4.7578	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.582	714658	714658	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.590	209005	714658	20	1.0066	ng/mL	1.0000

Insight Report

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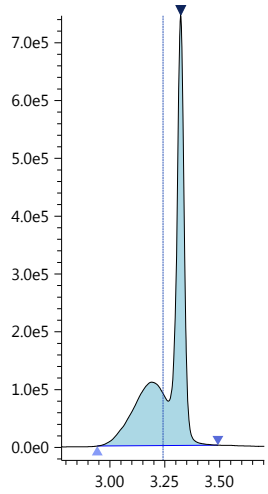
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.089	71574	699829	21	1.1376	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.085	699829	699829	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.085	699829	4739368	26	5.0687	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.748	843676	843676	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.748	843676	4739368	26	4.8660	ng/mL	5.0000
N-EtFOSA	Auto	5.754	28722	843676	23	0.9605	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.714	807637	807637	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.714	807637	4739368	26	4.9820	ng/mL	5.0000
N-EtFOSE	Auto	5.725	193686	807637	24	0.9860	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.066	4739368	4739368	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.196	81719	907207	16	0.8986	ng/mL	0.9409
PFNS	Auto	4.865	83739	605840	13	1.0901	ng/mL	0.9616

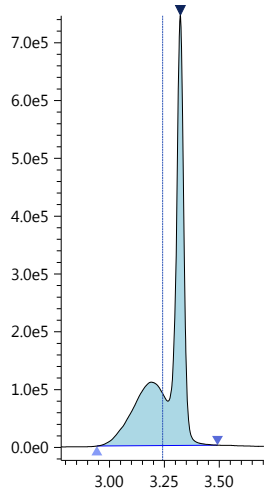
PFBA-13C_IS

Conc 5.0000
RT 3.322 Area 2924671
ISTD 216.90>172.15 (-) 7.47e5



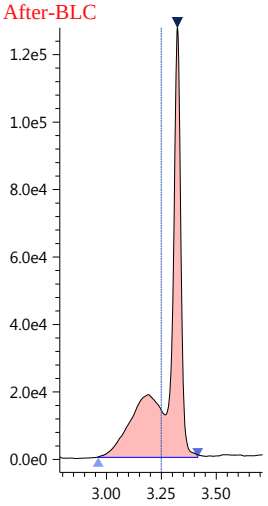
PFBA-13C

Conc 4.8092
RT 3.322 Area 2924671
Q 216.90>172.15 (-) 7.47e5



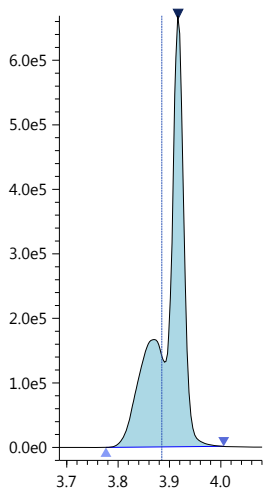
PFBA

Conc 0.9369
RT 3.323 Area 483340
Q 213.00>169.10 (-) 1.28e5
After-BLC



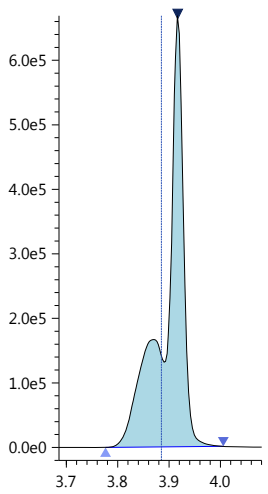
PFPeA-13C_IS

Conc 5.0000
RT 3.917 Area 1627466
ISTD 267.90>223.00 (-) 6.69e5



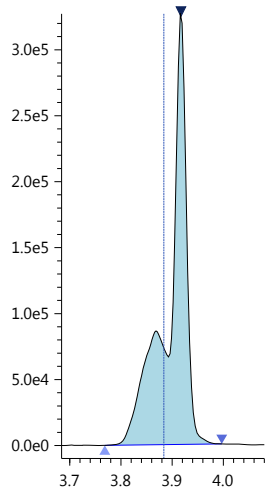
PFPeA-13C

Conc 4.8023
RT 3.917 Area 1627466
Q 267.90>223.00 (-) 6.69e5



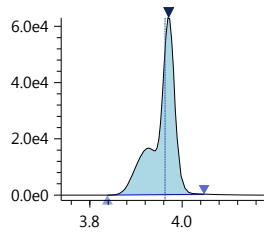
PFPeA

Conc 0.9186
RT 3.917 Area 795555
Q 263.05>219.10 (-) 3.27e5

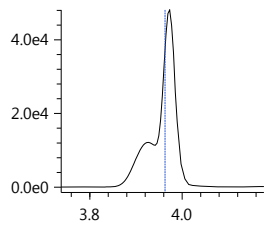


PFBS_1

Conc 0.9168
RT 3.971 Area 169430
R#1 73.88 (0.00)
Q 299.00>80.00 (-) 6.30e4

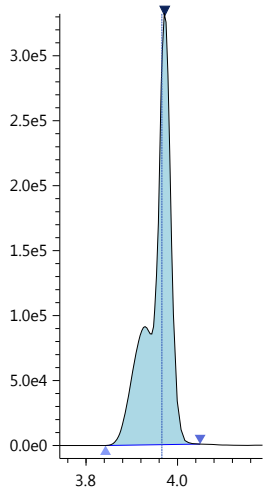


R1 298.80>99.00 (-) 4.81e4



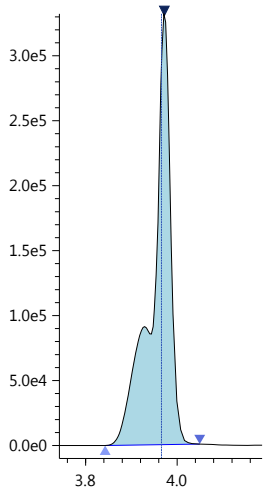
PFBS-13C

Conc 4.7832
RT 3.972 Area 907207
Q 301.80>80.00 (-) 3.32e5



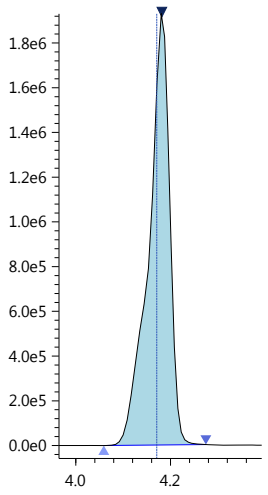
PFBS-13C_IS

Conc 5.0000
RT 3.972 Area 907207
ISTD 301.80>80.00 (-) 3.32e5



PFHxA-13C_IS

Conc 5.0000
RT 4.182 Area 5889200
ISTD 314.90>270.10 (-) 1.93e6



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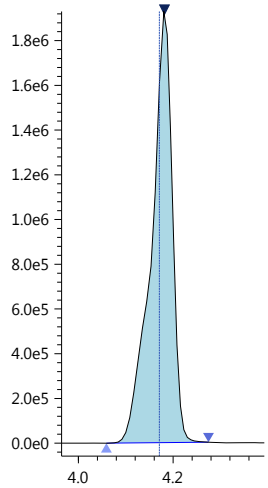
PFHxA-13C

Conc 5.2040
RT 4.182 Area 5889200

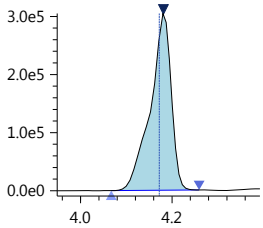
Q 314.90>270.10 (-) 1.93e6



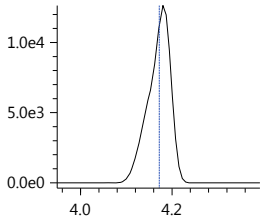
PFHxA

Conc 0.9178
RT 4.181 Area 955056
R#1 4.16 (0.00)

Q 313.00>269.00 (-) 3.05e5



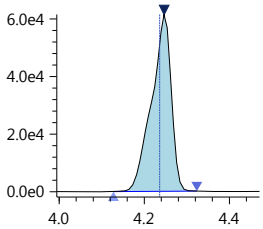
R1 313.00>119.10 (-) 1.26e4



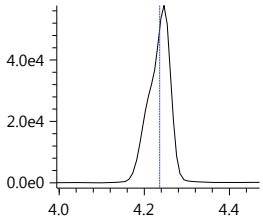
HPFO_DA

Conc 1.0498
RT 4.247 Area 196955
R#1 93.79 (0.00)

Q 329.00>169.00 (-) 6.15e4



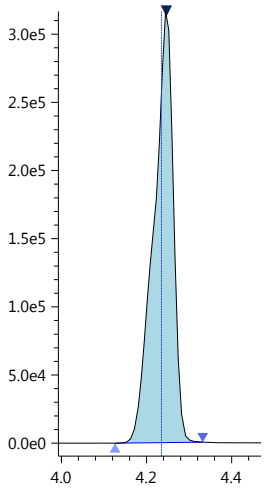
R1 329.00>285.10 (-) 5.77e4



HFPO_DA-13C_IS

Conc 5.0000
RT 4.247 Area 1011855

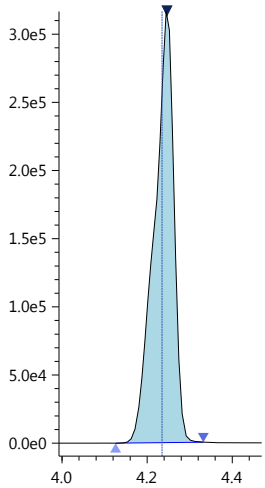
ISTD 332.00>286.80 (-) 3.17e5



HFPO_DA-13C

Conc 5.0195
RT 4.247 Area 1011855

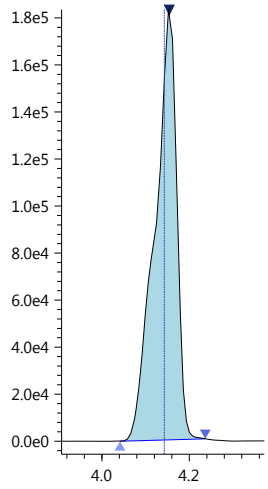
Q 332.00>286.80 (-) 3.17e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.154 Area 630441

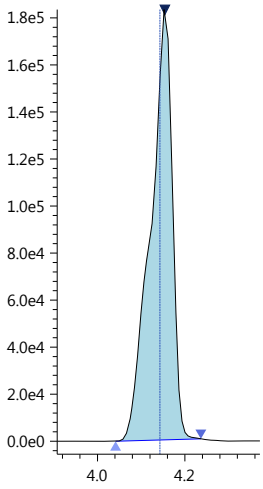
ISTD 328.80>309.05 (-) 1.84e5



4_2-FTS-13C

Conc 5.4147
RT 4.154 Area 630441

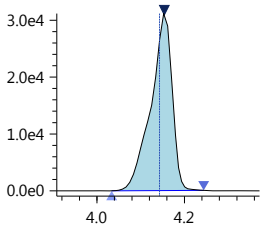
Q 328.80>309.05 (-) 1.84e5



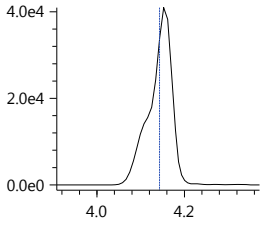
4_2-FTS_1

Conc 0.9599
RT 4.154 Area 104645
R#1 131.11 (0.00)

Q 327.00>307.05 (-) 3.12e4



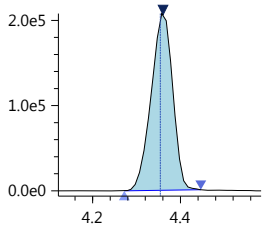
R1 327.00>81.10 (-) 4.10e4



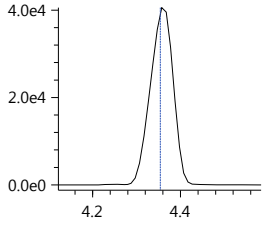
PFHpA

Conc 0.9145
RT 4.360 Area 708350
R#1 19.60 (0.00)

Q 362.90>319.00 (-) 2.08e5



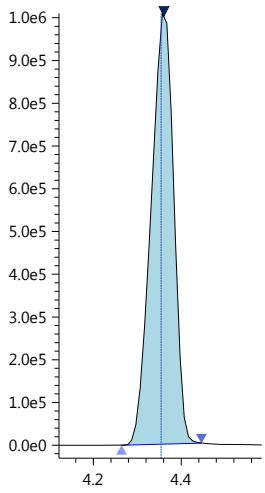
R1 362.90>169.00 (-) 4.06e4



PFHpA-13C_IS

Conc 5.0000
RT 4.361 Area 3624285

ISTD 366.90>322.10 (-) 1.01e6



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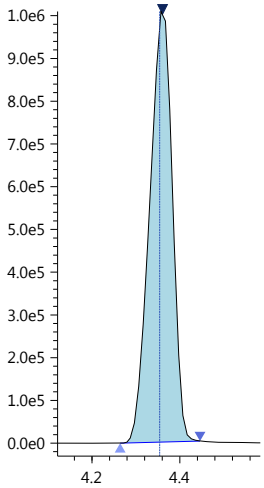
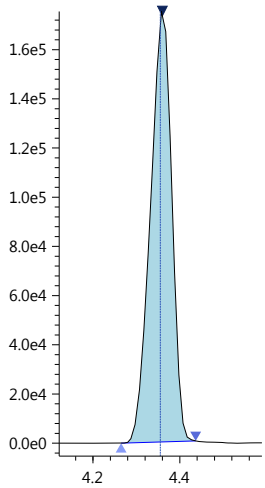
PFHpA-13C
Conc 4.2693
RT 4.361 Area 3624285

Q 366.90>322.10 (-) 1.01e6



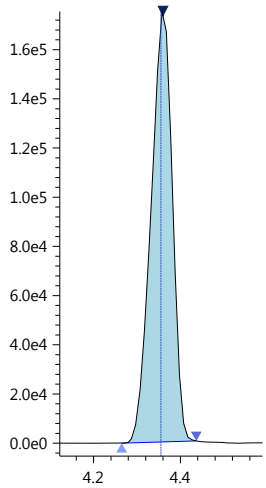
PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 597775

ISTD 402.70>84.05 (-) 1.76e5



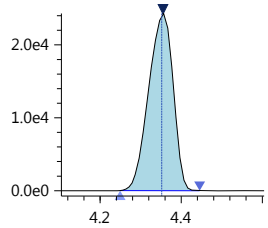
PFHxS-18O
Conc 4.5684
RT 4.360 Area 597775

Q 402.70>84.05 (-) 1.76e5

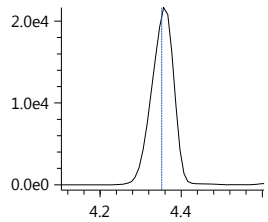


PFHxS_1
Conc 0.8880
RT 4.355 Area 102280
R#1 88.42 (0.00)

Q 399.00>80.00 (-) 2.43e4

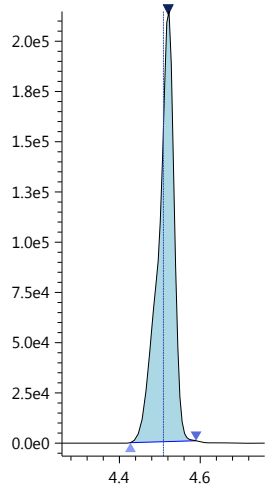


R1 399.00>99.00 (-) 2.17e4



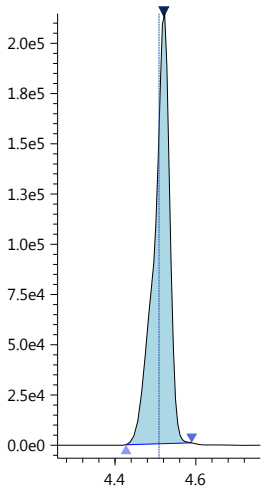
6_2-FTS-13C
Conc 4.8685
RT 4.521 Area 573143

Q 428.90>409.00 (-) 2.15e5



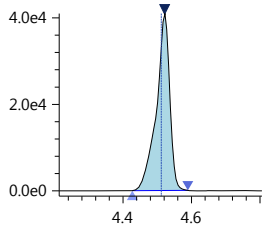
6_2-FTS-13C_IS
Conc 5.0000
RT 4.521 Area 573143

ISTD 428.90>409.00 (-) 2.15e5

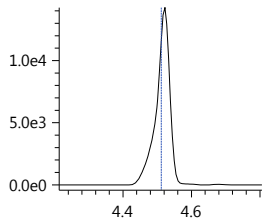


6_2-FTS_1
Conc 1.0488
RT 4.522 Area 111072
R#1 34.57 (0.00)

Q 427.00>407.00 (-) 4.10e4

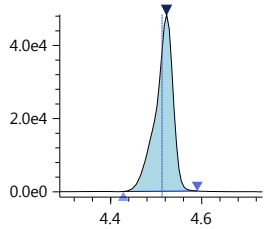


R1 427.00>80.90 (-) 1.43e4

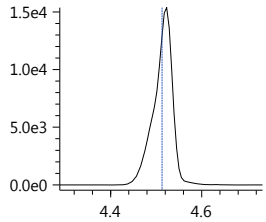


PFHpS_1
Conc 1.0493
RT 4.523 Area 126430
R#1 31.75 (0.00)

Q 449.00>80.15 (-) 4.84e4

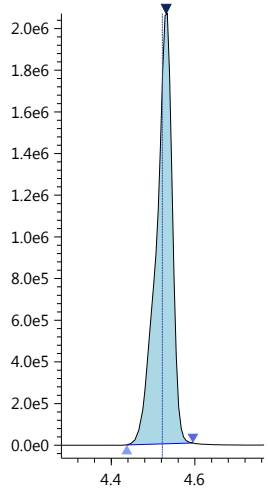


R1 449.00>99.20 (-) 1.54e4



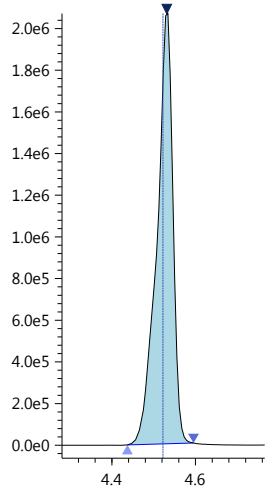
PFOA-13C_IS
Conc 5.0000
RT 4.531 Area 5478702

ISTD 416.80>372.05 (-) 2.07e6



PFOA-13C
Conc 4.8417
RT 4.531 Area 5478702

Q 416.80>372.05 (-) 2.07e6



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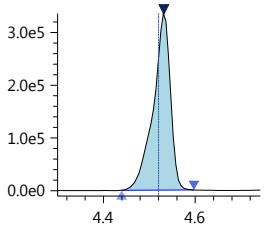
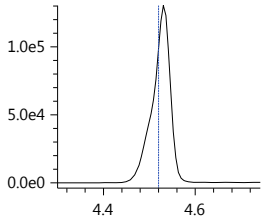
PFOA

Conc 0.9657
RT 4.531 Area 868007
R#1 38.90 (0.00)

Q 413.00>369.00 (-) 3.36e5



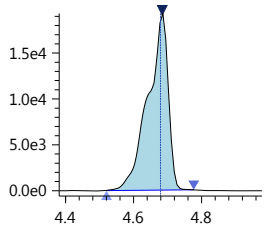
R1 413.00>169.10 (-) 1.30e5



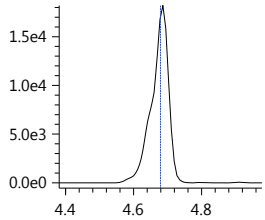
PFOS_1

Conc 0.8912
RT 4.684 Area 79625
R#1 94.66 (0.00)

Q 499.00>80.00 (-) 1.93e4



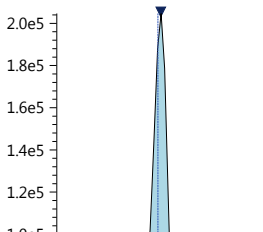
R1 499.00>99.00 (-) 1.82e4



PFOS-13C_IS

Conc 5.0000
RT 4.686 Area 605840

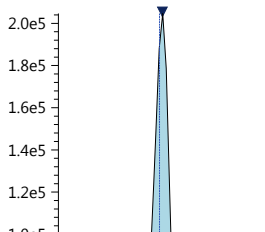
ISTD 502.80>80.05 (-) 2.05e5



PFOS-13C

Conc 4.4362
RT 4.686 Area 605840

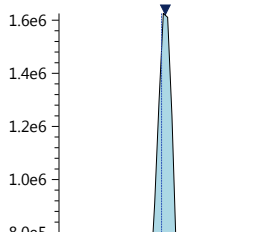
Q 502.80>80.05 (-) 2.05e5



PFNA-13C_IS

Conc 5.0000
RT 4.699 Area 4635469

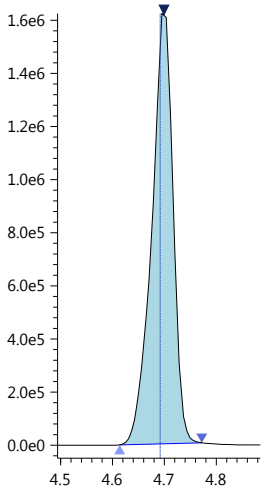
ISTD 467.80>423.00 (-) 1.63e6



PFNA-13C

Conc 4.9233
RT 4.699 Area 4635469

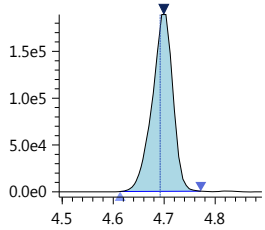
Q 467.80>423.00 (-) 1.63e6



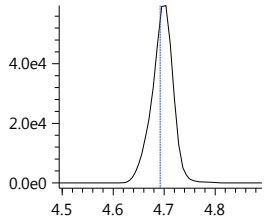
PFNA

Conc 0.8733
RT 4.699 Area 537429
R#1 31.32 (0.00)

Q 463.00>418.90 (-) 1.89e5



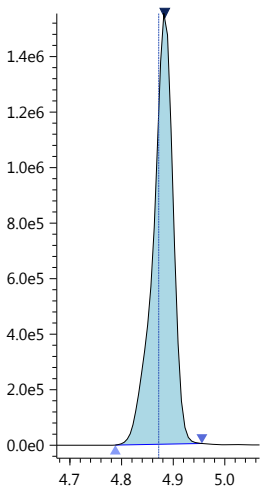
R1 463.00>219.00 (-) 5.95e4



PFDA-13C_IS

Conc 5.0000
RT 4.884 Area 4178189

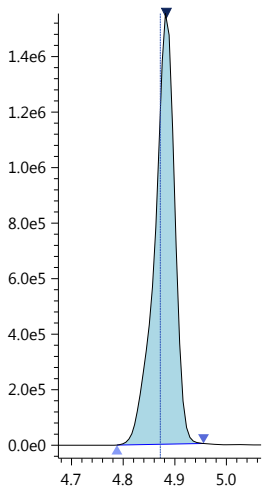
ISTD 514.80>469.95 (-) 1.55e6



PFDA-13C

Conc 5.0833
RT 4.884 Area 4178189

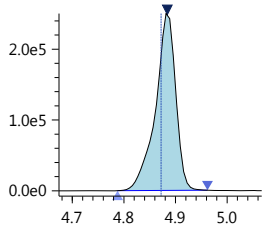
Q 514.80>469.95 (-) 1.55e6



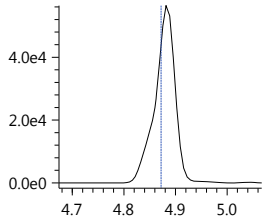
PFDA

Conc 0.9711
RT 4.884 Area 679305
R#1 21.82 (0.00)

Q 513.00>468.80 (-) 2.50e5



R1 513.00>219.10 (-) 5.64e4



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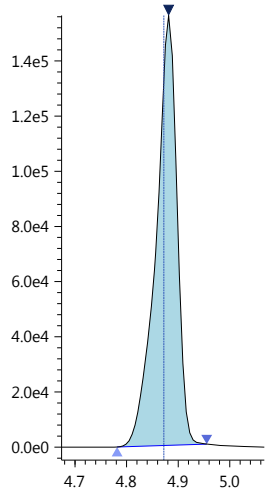
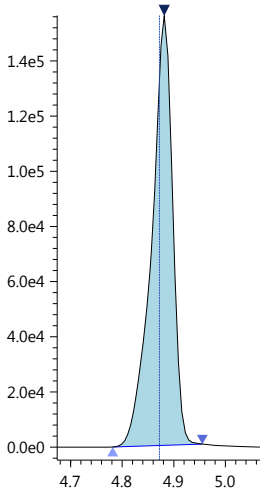
8_2-FTS-13C_IS
Conc 5.0000
RT 4.881 Area 439430

ISTD 528.80>509.00 (-) 1.56e5



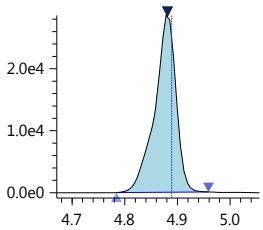
8_2-FTS-13C
Conc 4.7997
RT 4.881 Area 439430

Q 528.80>509.00 (-) 1.56e5

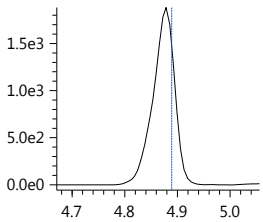


8_2-FTS_1
Conc 1.0342
RT 4.881 Area 80111
R#1 6.54 (0.00)

Q 527.10>506.90 (-) 2.86e4

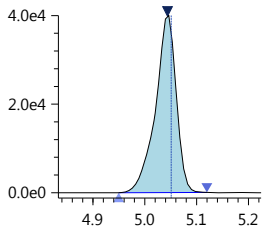


R1 527.20>487.00 (-) 1.88e3

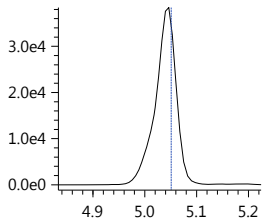


PFDS_1
Conc 0.9999
RT 5.044 Area 111383
R#1 95.96 (0.00)

Q 599.00>79.90 (-) 4.00e4

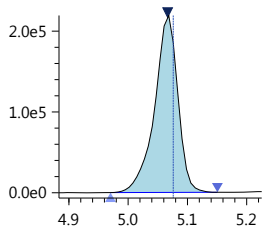


R1 599.00>99.10 (-) 3.84e4

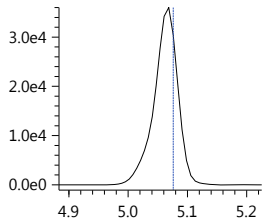


PFUnA
Conc 0.9709
RT 5.067 Area 596164
R#1 16.42 (0.00)

Q 563.00>518.90 (-) 2.20e5

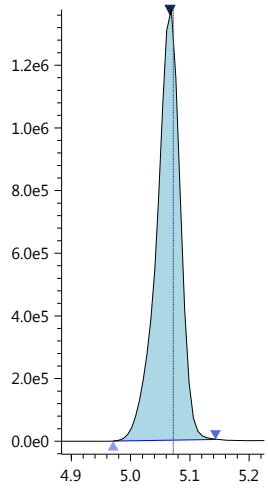


R1 563.00>219.00 (-) 3.60e4



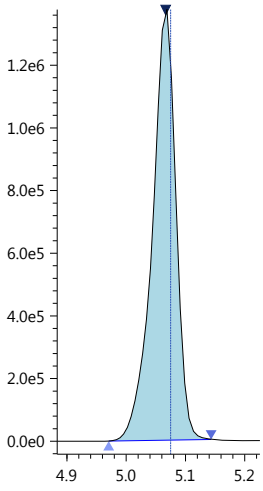
PFUnA-13C_IS
Conc 5.0000
RT 5.067 Area 3799021

ISTD 564.80>519.95 (-) 1.38e6



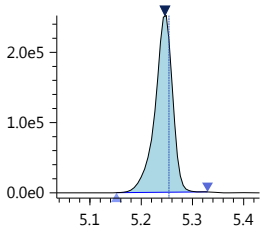
PFUnA-13C
Conc 4.9398
RT 5.067 Area 3799021

Q 564.80>519.95 (-) 1.38e6

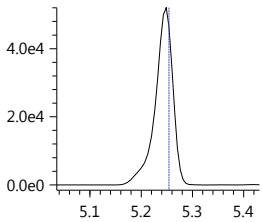


PFDoA
Conc 0.9483
RT 5.246 Area 603189
R#1 19.87 (0.00)

Q 613.05>569.00 (-) 2.52e5

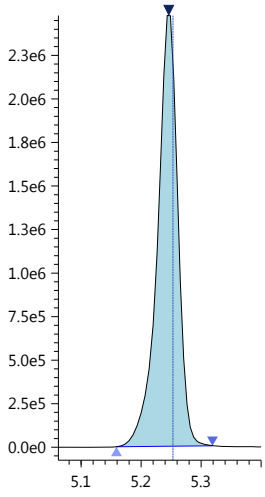


R1 613.05>169.00 (-) 5.21e4



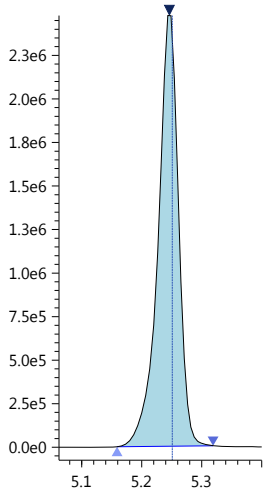
PFDoA-13C
Conc 5.2589
RT 5.246 Area 5868366

Q 614.80>569.95 (-) 2.48e6



PFDoA-13C_IS
Conc 5.0000
RT 5.246 Area 5868366

ISTD 614.80>569.95 (-) 2.48e6



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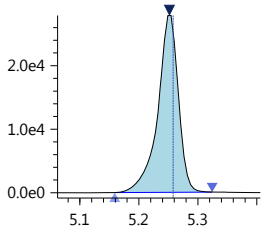
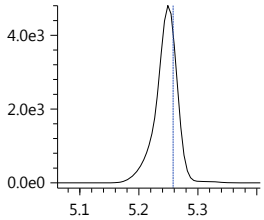
10_2-FtS_1

Conc 1.0753
RT 5.252 Area 67572
R#1 17.22 (0.00)

Q 627.00>606.95 (-) 2.79e4



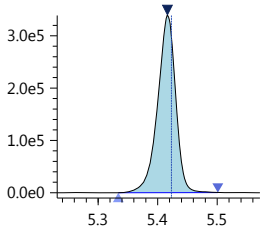
R1 627.00>81.25 (-) 4.81e3



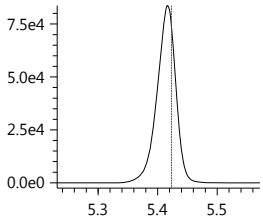
PFTrDA

Conc 0.9569
RT 5.416 Area 713779
R#1 23.99 (0.00)

Q 663.00>618.90 (-) 3.39e5



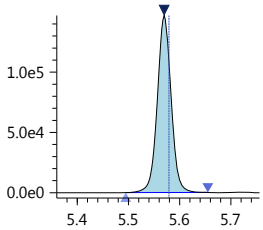
R1 662.90>169.00 (-) 8.37e4



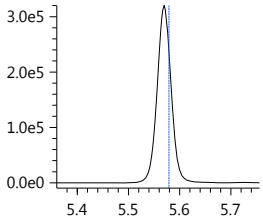
PFTeDA

Conc 0.9670
RT 5.570 Area 275155
R#1 215.39 (0.00)

Q 713.40>669.00 (-) 1.47e5



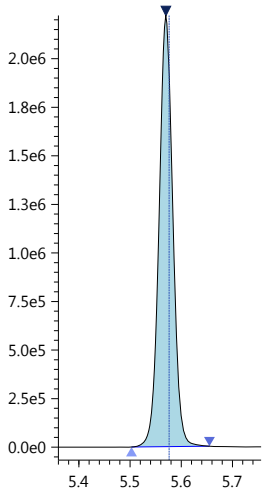
R1 713.40>169.10 (-) 3.20e5



PFTeDA-13C

Conc 5.2003
RT 5.570 Area 4152306

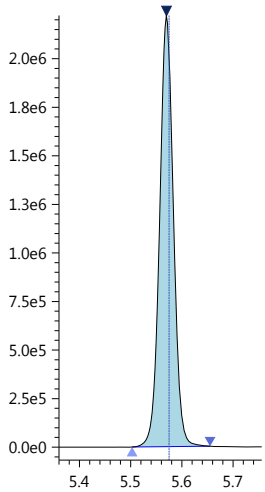
Q 714.70>669.90 (-) 2.22e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.570 Area 4152306

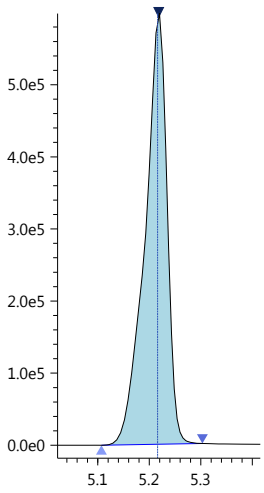
ISTD 714.70>669.90 (-) 2.22e6



FOSA-13C_IS

Conc 5.0000
RT 5.218 Area 1774335

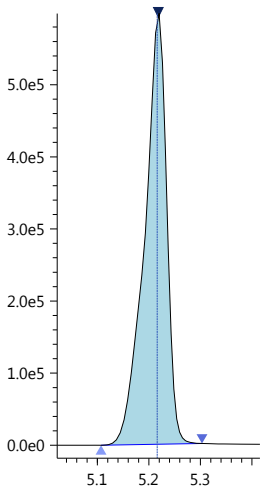
ISTD 506.00>78.05 (-) 5.99e5



FOSA-13C

Conc 4.8830
RT 5.218 Area 1774335

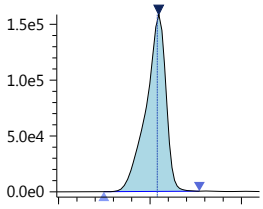
Q 506.00>78.05 (-) 5.99e5



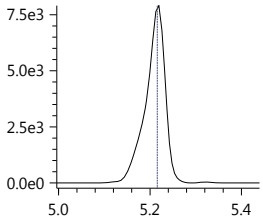
FOSA

Conc 1.0066
RT 5.219 Area 477149
R#1 5.02 (0.00)

Q 498.20>78.00 (-) 1.59e5



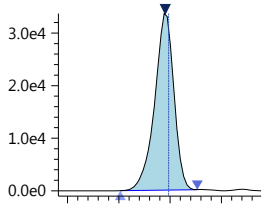
R1 498.20>64.10 (-) 7.91e3



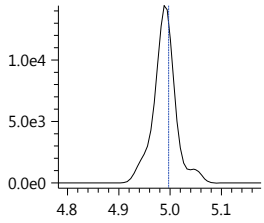
N-MeFOSAA

Conc 1.1321
RT 4.990 Area 87743
R#1 40.53 (0.00)

Q 570.20>419.00 (-) 3.37e4



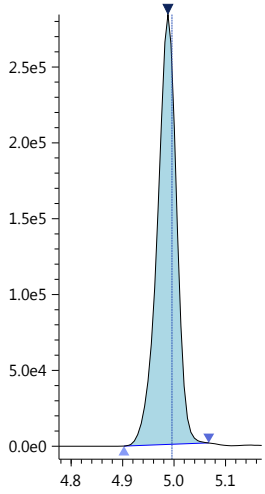
R1 570.20>512.00 (-) 1.44e4



N-MeFOSAA-d3

Conc 5.1408
RT 4.988 Area 739313

Q 572.80>419.05 (-) 2.85e5



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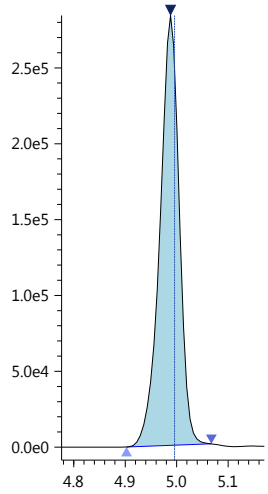
N-MeFOSAA-d3_IS

Conc 5.0000
RT 4.988 Area 739313

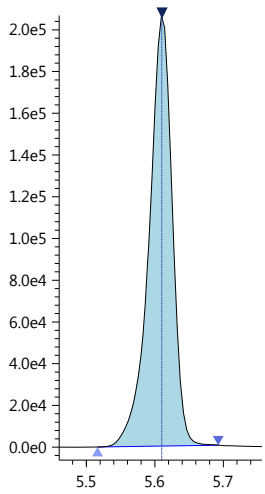
ISTD 572.80>419.05 (-) 2.85e5



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.611 Area 486260

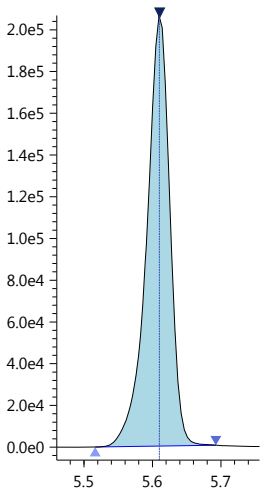
ISTD 514.90>168.90 (-) 2.07e5



N-MeFOSA-d3

Conc 4.7026
RT 5.611 Area 486260

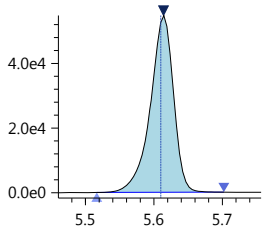
Q 514.90>168.90 (-) 2.07e5



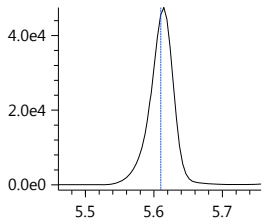
N-MeFOSA

Conc 1.0014
RT 5.614 Area 128583
R#1 87.00 (0.00)

Q 512.00>169.10 (-) 5.48e4



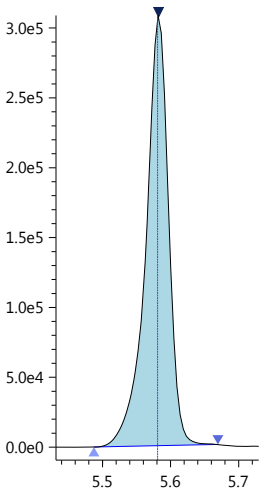
R1 512.00>219.00 (-) 4.75e4



N-MeFOSE-d7

Conc 4.7578
RT 5.582 Area 714658

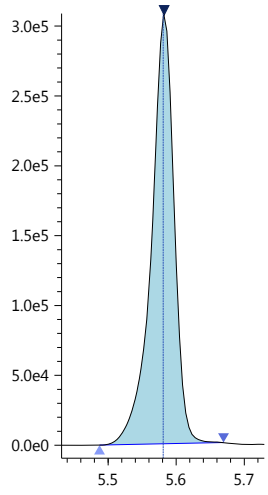
Q 622.70>59.10 (-) 3.09e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.582 Area 714658

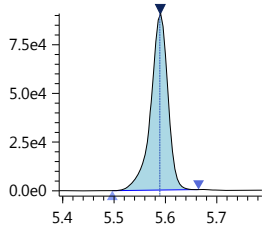
ISTD 622.70>59.10 (-) 3.09e5



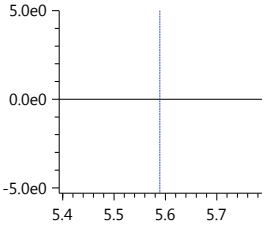
N-MeFOSE

Conc 1.0066
RT 5.590 Area 209005
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 9.10e4



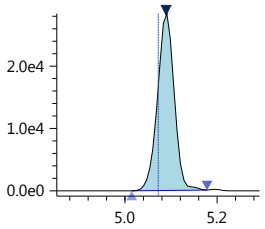
R1 556.00>121.20 (-) 0.00e0



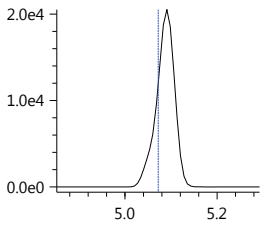
N-EtFOSAA

Conc 1.1376
RT 5.089 Area 71574
R#1 69.88 (0.00)

Q 584.20>418.95 (-) 2.84e4



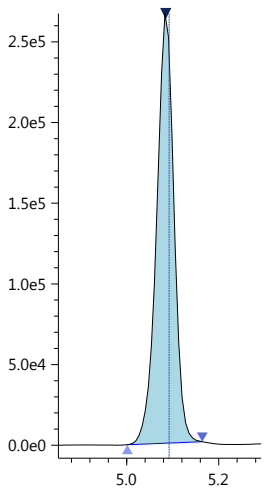
R1 584.20>526.10 (-) 2.05e4



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.085 Area 699829

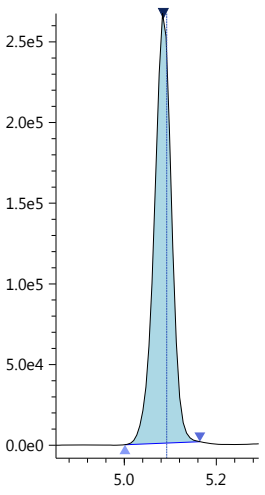
ISTD 588.80>419.00 (-) 2.68e5



N-EtFOSAA-d5

Conc 5.0687
RT 5.085 Area 699829

Q 588.80>419.00 (-) 2.68e5



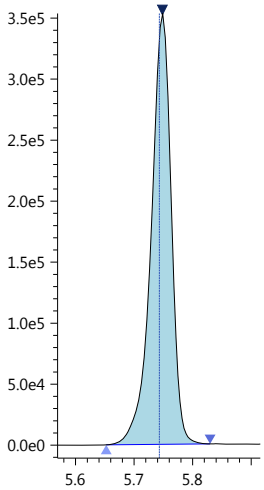
Insight Report

Printed at 1/7/2019 12:54:42 PM

N-EtFOSA-d9_IS

Conc 5.0000
RT 5.748 Area 843676

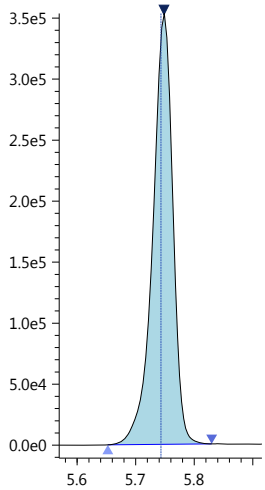
ISTD 530.90>169.15 (-) 3.54e5



N-EtFOSA-d9

Conc 4.8660
RT 5.748 Area 843676

Q 530.90>169.15 (-) 3.54e5



N-EtFOSA

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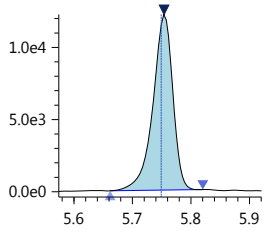
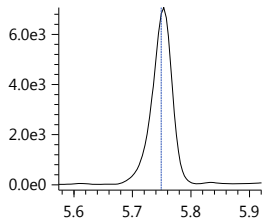
RT 5.754 Area 28722
R#1 58.44 (0.00)

Q 526.90>169.10 (-) 1.23e4



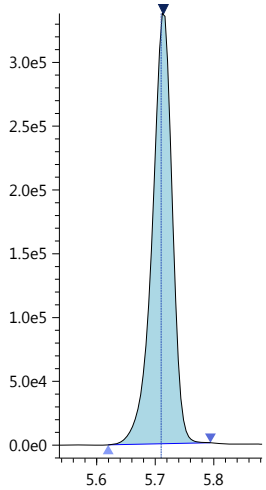
R1 526.90>219.00 (-) 7.07e3



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.714 Area 807637

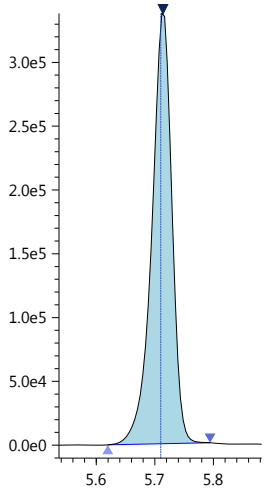
ISTD 638.70>59.10 (-) 3.38e5



N-EtFOSE-d9

Conc 4.9820
RT 5.714 Area 807637

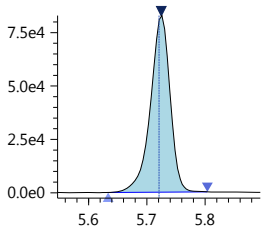
Q 638.70>59.10 (-) 3.38e5



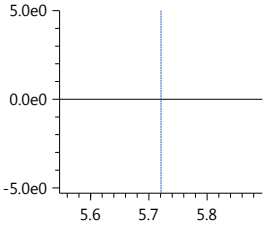
N-EtFOSE

Conc 0.9860
RT 5.725 Area 193686
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 8.30e4



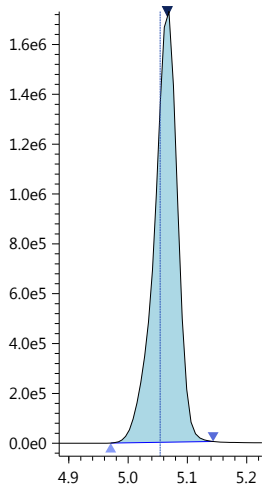
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.066 Area 4739368

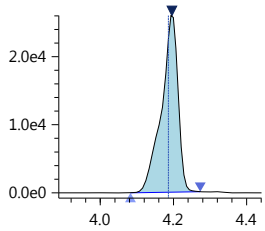
ISTD 570.00>525.00 (-) 1.73e6



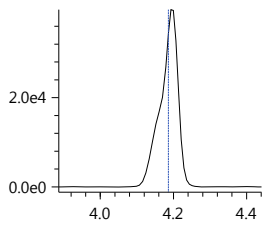
PFPeS

Conc 0.8986
RT 4.196 Area 81719
R#1 152.89 (0.00)

Q 349.00>99.00 (-) 2.60e4



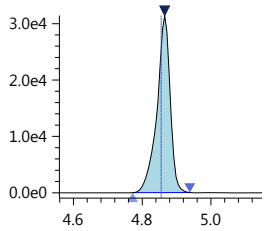
R1 349.00>79.95 (-) 3.97e4



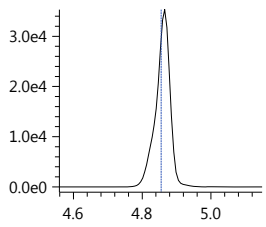
PFNS

Conc 1.0901
RT 4.865 Area 83739
R#1 111.84 (0.00)

Q 549.00>99.00 (-) 3.14e4



R1 549.00>79.95 (-) 3.53e4



Insight Report

Printed at 1/7/2019 10:13:37 AM

010419_024

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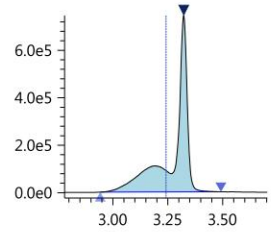
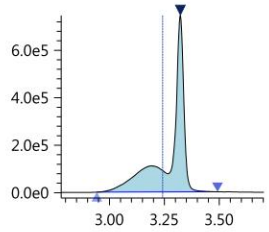
Date acquired: 1/4/2019 6:29:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_024.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.322 Area 2924671
ISTD 216.90>172.15 (-) 7.47e5



PFBA-13C
Conc 4.8092
RT 3.322 Area 2924671
Q 216.90>172.15 (-) 7.47e5



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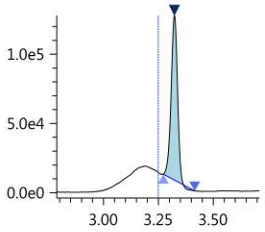
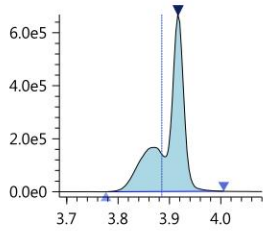
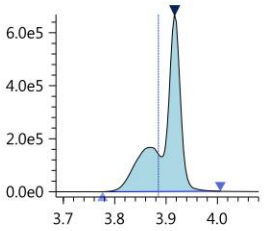
Conc 0.8204
RT 3.323 Area 236226
Q 213.00>169.10 (-) 1.28e5



PFPeA-13C_IS
Conc 5.0000
RT 3.917 Area 1627466
ISTD 267.90>223.00 (-) 6.69e5



PFPeA-13C
Conc 4.8023
RT 3.917 Area 1627466
Q 267.90>223.00 (-) 6.69e5



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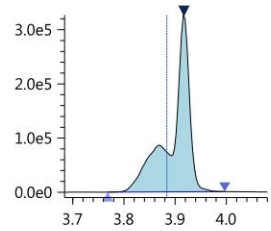
Conc 0.7141
RT 3.917 Area 795555
Q 263.05>219.10 (-) 3.27e5



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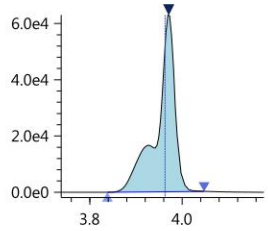
Conc 0.9168
RT 3.971 Area 169430
Q 299.00>80.00 (-) 6.30e4



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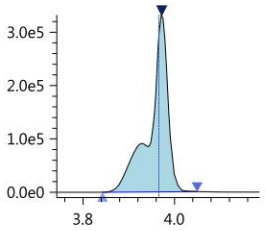
RT 3.972 Area 907207
Q 301.80>80.00 (-) 3.32e5



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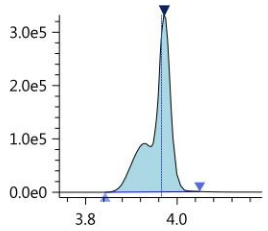

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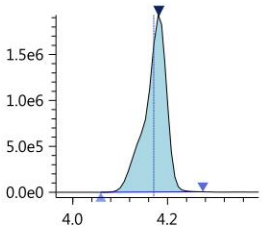
Conc 5.0000
RT 4.182 Area 5889200
ISTD 314.90>270.10 (-) 1.93e6



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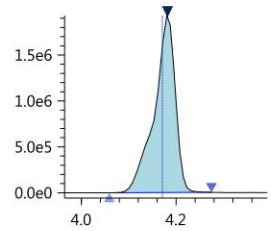
Conc 5.2040
RT 4.182 Area 5889200
Q 314.90>270.10 (-) 1.93e6



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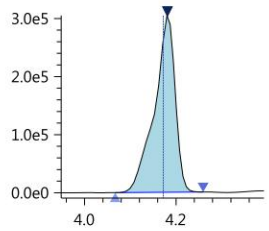
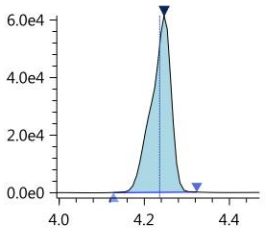
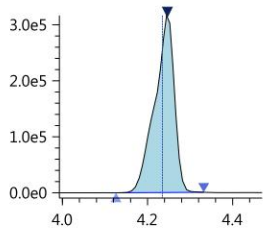
Conc 0.9108
RT 4.181 Area 955056
Q 313.00>269.00 (-) 3.05e5



HPFO_DA
Conc 1.0498
RT 4.247 Area 196955
Q 329.00>169.00 (-) 6.15e4



HFPO_DA-13C_IS
Conc 5.0000
RT 4.247 Area 1011855
ISTD 332.00>286.80 (-) 3.17e5



HFPO_DA-13C
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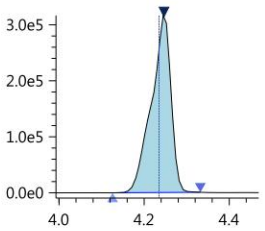
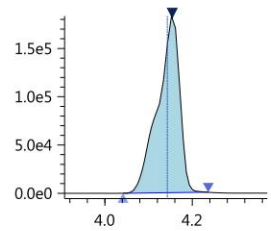
Q 332.00>286.80 (-) 3.17e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.154 Area 630441
ISTD 328.80>309.05 (-) 1.84e5



4_2-FTS-13C
Conc 5.4147
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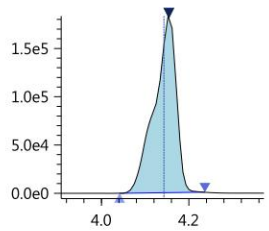
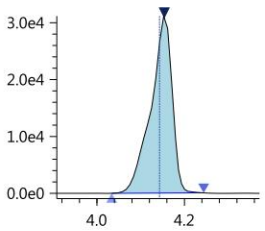
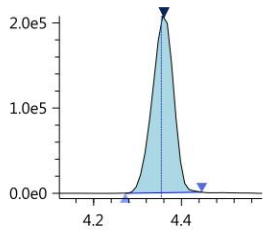
Q 328.80>309.05 (-) 1.84e5



4_2-FTS_1
Conc 1.0061
RT 4.154 Area 104645
Q 327.00>307.05 (-) 3.12e4



PFHpA
Conc 0.9119
RT 4.360 Area 708350
Q 362.90>319.00 (-) 2.08e5



PFHpA-13C_IS
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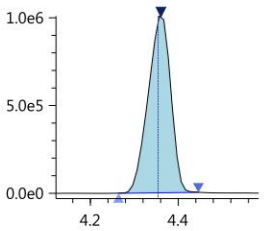
RT 4.361 Area 3624285
ISTD 366.90>322.10 (-) 1.01e6



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Printed at 1/7/2019 10:13:37 AM

PFHpA-13C
Conc 4.2693
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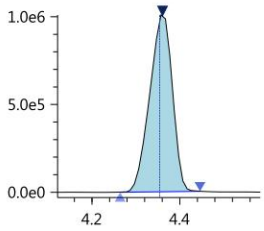

PFHxS-18O_IS
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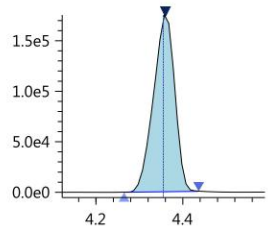
ISTD 402.70>84.05 (-) 1.76e5



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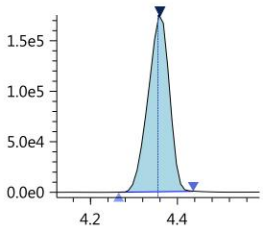

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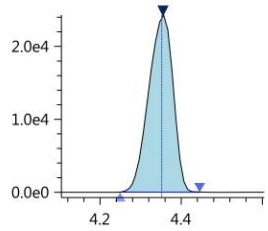
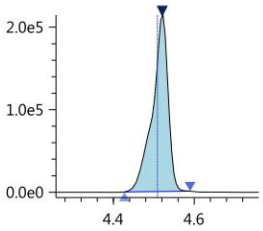
Conc 0.8939
RT 4.355 Area 102280
Q 399.00>80.00 (-) 2.43e4



6_2-FTS-13C
Conc 4.8685
RT 4.521 Area 573143
Q 428.90>409.00 (-) 2.15e5



6_2-FTS-13C_IS
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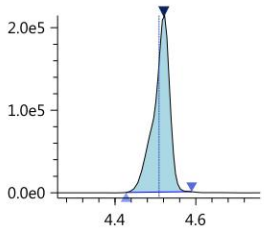
RT 4.521 Area 573143
ISTD 428.90>409.00 (-) 2.15e5



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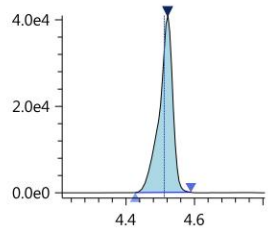
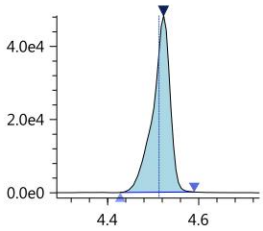
Conc 1.0488
RT 4.522 Area 111072
Q 427.00>407.00 (-) 4.10e4



PFHpS_1
Conc 1.0493
RT 4.523 Area 126430
Q 449.00>80.15 (-) 4.84e4



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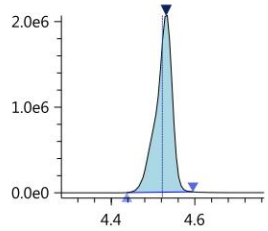
Conc 5.0000
RT 4.531 Area 5478702
ISTD 416.80>372.05 (-) 2.07e6



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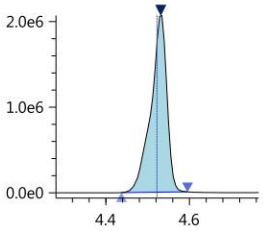
RT 4.531 Area 5478702
Q 416.80>372.05 (-) 2.07e6



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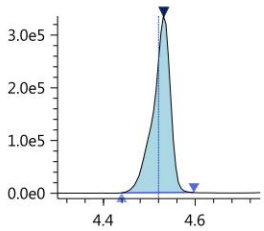
RT 4.531 Area 868007
Q 413.00>369.00 (-) 3.36e5



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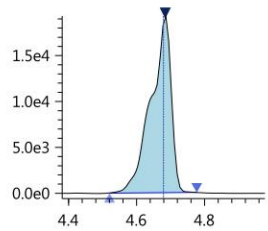
Q 499.00>80.00 (-) 1.93e4



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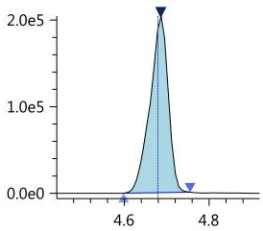

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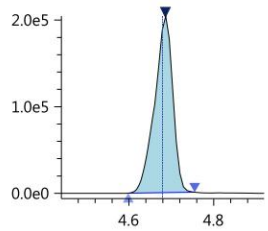

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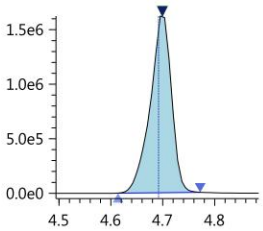
Conc 5.0000
RT 4.699 Area 4635469
ISTD 467.80>423.00 (-) 1.63e6



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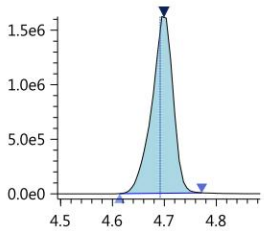
Conc 4.9233
RT 4.699 Area 4635469
Q 467.80>423.00 (-) 1.63e6



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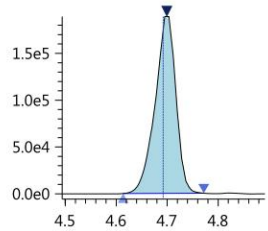
Q 463.00>418.90 (-) 1.89e5



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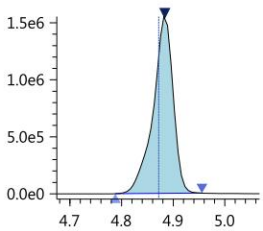

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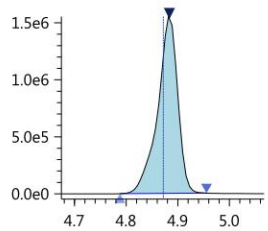

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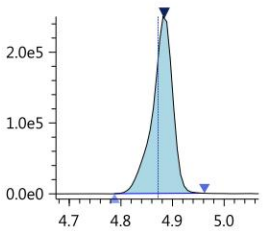
RT 4.884 Area 679305
Q 513.00>468.80 (-) 2.50e5



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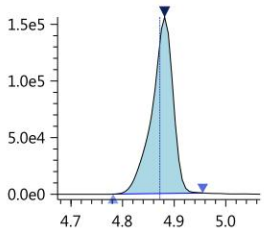
8_2-FTS-13C_IS
Conc 5.0000
RT 4.881 Area 439430
ISTD 528.80>509.00 (-) 1.56e5



8_2-FTS-13C
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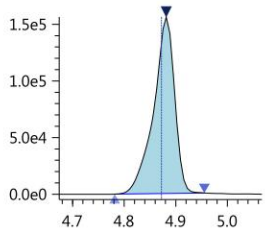
Q 528.80>509.00 (-) 1.56e5



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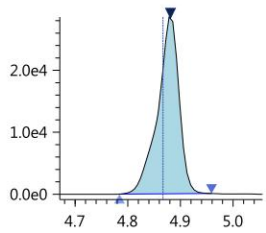

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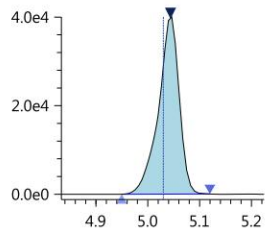
Q 599.00>79.90 (-) 4.00e4



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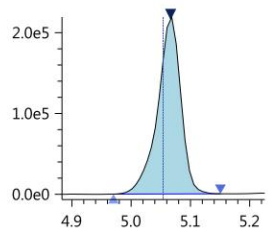

PFUnA-13C_IS
Conc 5.0000
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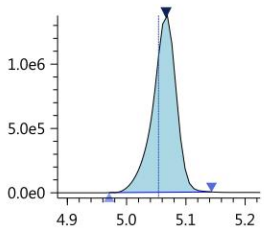
ISTD 564.80>519.95 (-) 1.38e6



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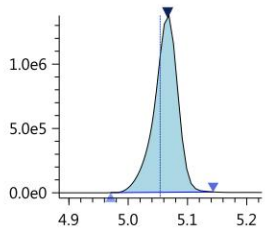

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Conc 0.9838
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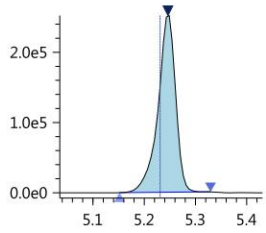
Q 613.05>569.00 (-) 2.52e5



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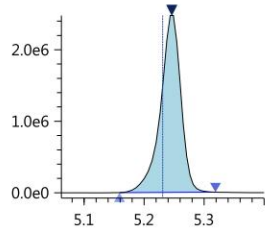
Q 614.80>569.95 (-) 2.48e6



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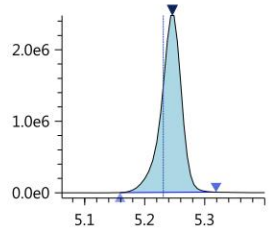

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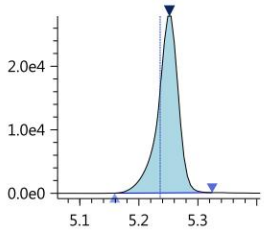

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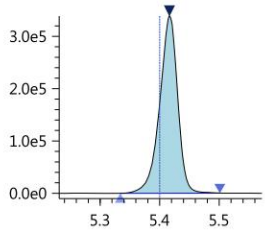

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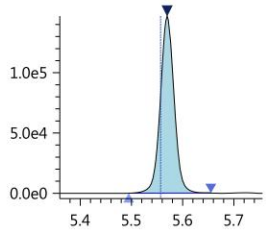
Q 713.40>669.00 (-) 1.47e5



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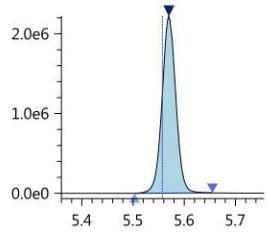
Q 714.70>669.90 (-) 2.22e6



PFTeDA-13C_IS
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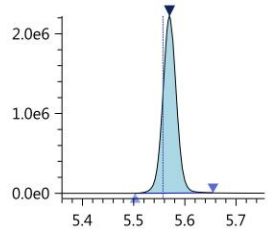

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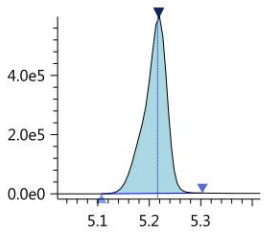
Conc 5.0000
RT 5.218 Area 1774335
ISTD 506.00>78.05 (-) 5.99e5



FOSA-13C
Conc 4.8830
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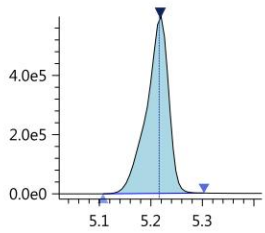
Q 506.00>78.05 (-) 5.99e5



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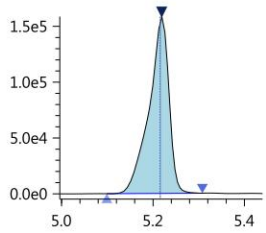
RT 5.219 Area 477149
Q 498.20>78.00 (-) 1.59e5



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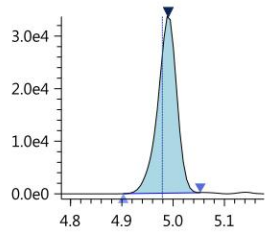
Conc 1.2960
RT 4.990 Area 87743
Q 570.20>419.00 (-) 3.37e4



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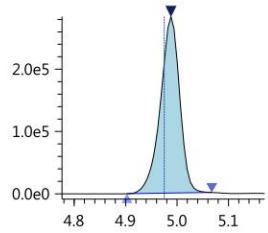
RT 4.988 Area 739313
Q 572.80>419.05 (-) 2.85e5



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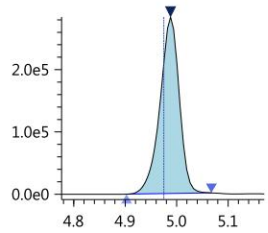
ISTD 572.80>419.05 (-) 2.85e5



N-MeFOSA-d3_IS
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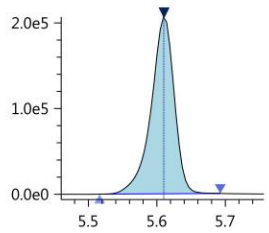
RT 5.611 Area 486260
ISTD 514.90>168.90 (-) 2.07e5



N-MeFOSA-d3
Conc 4.7026
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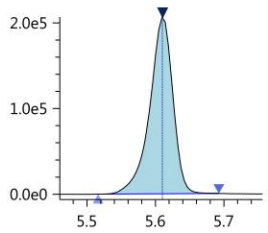
Q 514.90>168.90 (-) 2.07e5



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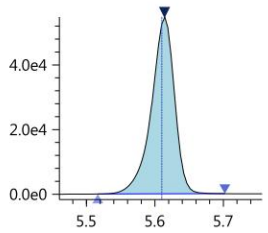
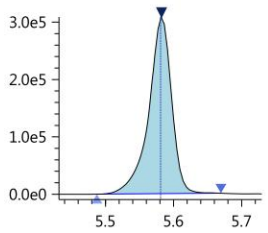


N-MeFOSE-d7
Conc 4.7578
RT 5.582 Area 714658
Q 622.70>59.10 (-) 3.09e5



N-MeFOSE-d7_IS
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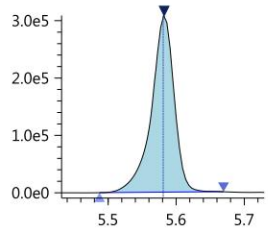
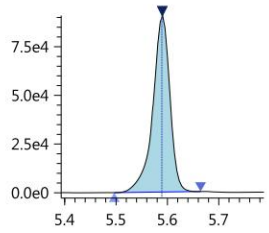
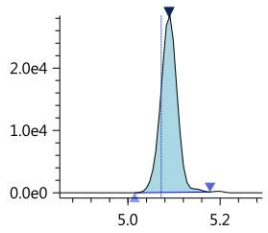
ISTD 622.70>59.10 (-) 3.09e5



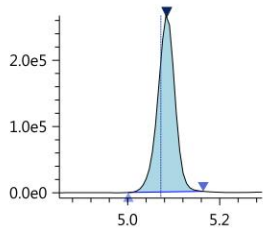
N-MeFOSE
Conc 1.0066
RT 5.590 Area 209005
Q 616.00>59.00 (-) 9.10e4



N-EtFOSAA
Conc 1.3850
RT 5.089 Area 71574
Q 584.20>418.95 (-) 2.84e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.085 Area 699829
ISTD 588.80>419.00 (-) 2.68e5



N-EtFOSAA-d5
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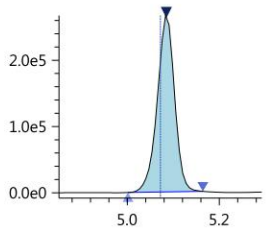
Q 588.80>419.00 (-) 2.68e5



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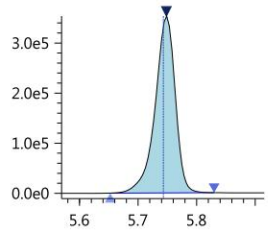
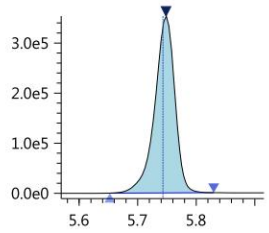
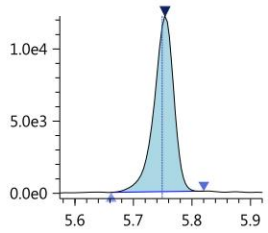


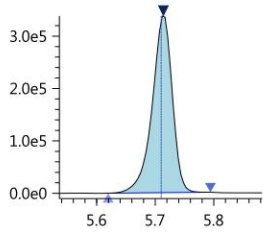
N-EtFOSA-d9
Conc 4.8660
RT 5.748 Area 843676
Q 530.90>169.15 (-) 3.54e5



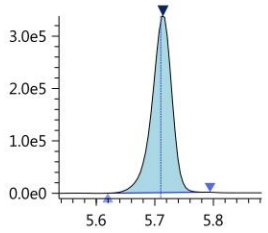
N-EtFOSA
Conc 0.9884
RT 5.754 Area 28722
Q 526.90>169.10 (-) 1.23e4



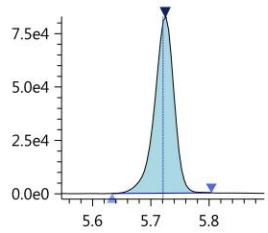
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.714 Area 807637
ISTD 638.70>59.10 (-) 3.38e5



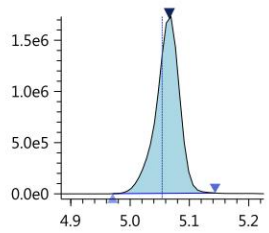
N-EtFOSE-d9
Conc 4.9820
RT 5.714 Area 807637
Q 638.70>59.10 (-) 3.38e5



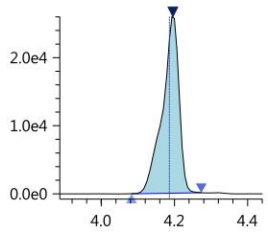
N-EtFOSE
Conc 0.9860
RT 5.725 Area 193686
Q 630.00>58.90 (-) 8.30e4



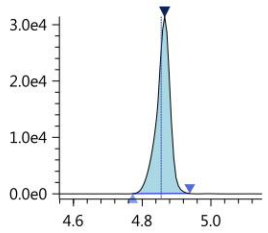
13C7-PFUnDA_IS
Conc 5.0000
RT 5.066 Area 4739368
ISTD 570.00>525.00 (-) 1.73e6



PFPeS
Conc 0.9331
RT 4.196 Area 81719
Q 349.00>99.00 (-) 2.60e4



PFNS
Conc 1.1776
RT 4.865 Area 83739
Q 549.00>99.00 (-) 3.14e4



Insight Report

Printed at 1/7/2019 12:54:42 PM

010419_025

Sample ID: IB
Date acquired: 1/4/2019 6:40:21 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_025.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.330	2965447	2965447	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.330	2965447	5019055	26	4.6045	ng/mL	----
PFBA	ND(W/B)	----	----	2965447	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.925	1654193	1654193	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.925	1654193	5019055	26	4.6092	ng/mL	----
PFPeA	Auto	3.926	74542	1654193	4	0.0095	ng/mL	----
PFBS_1	M	3.972	101	934519	16	0.0005	ng/mL	----
PFBS-13C	Auto	3.981	934519	5019055	26	4.6527	ng/mL	----
PFBS-13C_IS	Auto	3.981	934519	934519	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.189	5697186	5697186	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.189	5697186	5019055	26	4.7538	ng/mL	----
PFHxA	M	4.184	7312	5697186	6	0.0052	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1023824	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.254	1023824	1023824	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.254	1023824	5019055	26	4.7959	ng/mL	----
4_2-FTS-13C_IS	Auto	4.161	558329	558329	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.161	558329	5019055	26	4.5281	ng/mL	----
4_2-FTS_1	Auto	4.170	122	558329	5	0.0013	ng/mL	----
PFHpA	Auto	4.368	4735	4582216	8	0.0040	ng/mL	----
PFHpA-13C_IS	Auto	4.370	4582216	4582216	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.370	4582216	5019055	26	5.0969	ng/mL	----
PFHxS-18O_IS	Auto	4.369	680598	680598	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.369	680598	5019055	26	4.9115	ng/mL	----
PFHxS_1	Auto	4.367	2526	680598	7	0.0193	ng/mL	----
6_2-FTS-13C	Auto	4.527	577566	5019055	26	4.6327	ng/mL	----
6_2-FTS-13C_IS	Auto	4.527	577566	577566	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.483	185	577566	10	0.0017	ng/mL	----
PFHpS_1	ND(W/B)	----	----	680598	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.537	5659263	5659263	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.537	5659263	5019055	26	4.7225	ng/mL	----
PFOA	Auto	4.537	9374	5659263	9	0.0094	ng/mL	----
PFOS_1	Auto	4.691	216	696574	13	0.0021	ng/mL	----
PFOS-13C_IS	Auto	4.692	696574	696574	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.692	696574	5019055	26	4.8164	ng/mL	----
PFNA-13C_IS	Auto	4.706	4895319	4895319	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.706	4895319	5019055	26	4.9095	ng/mL	----
PFNA	Auto	4.712	2848	4895319	11	0.0074	ng/mL	----
PFDA-13C_IS	Auto	4.890	4094107	4094107	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.890	4094107	5019055	26	4.7034	ng/mL	----
PFDA	Auto	4.888	2576	4094107	12	0.0038	ng/mL	----
8_2-FTS-13C_IS	Auto	4.888	444874	444874	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.888	444874	5019055	26	4.5884	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	444874	15	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	696574	13	----	ng/mL	----
PFUnA	M	5.071	10999	3991942	14	0.0167	ng/mL	----
PFUnA-13C_IS	Auto	5.072	3991942	3991942	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.072	3991942	5019055	26	4.9014	ng/mL	----
PFDoA	M	5.251	2338	5596370	17	0.0135	ng/mL	----
PFDoA-13C	Auto	5.253	5596370	5019055	26	4.7357	ng/mL	----
PFDoA-13C_IS	Auto	5.253	5596370	5596370	17	5.0000	ng/mL	----
10_2-FtS_1	M	5.249	42	444874	15	0.0007	ng/mL	----
PFTrDA	M	5.421	2151	3990940	22	0.0010	ng/mL	----
PFTeDA	Auto	5.577	27706	3990940	22	0.0018	ng/mL	----
PFTeDA-13C	Auto	5.576	3990940	5019055	26	4.7197	ng/mL	----
PFTeDA-13C_IS	Auto	5.576	3990940	3990940	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.225	1698327	1698327	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.225	1698327	5019055	26	4.4133	ng/mL	----
FOSA	Auto	5.225	836	1698327	18	0.0018	ng/mL	----
N-MeFOSAA	Auto	4.991	561	692125	19	0.0077	ng/mL	----
N-MeFOSAA-d3	Auto	4.994	692125	5019055	26	4.5445	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.994	692125	692125	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.617	501213	501213	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.617	501213	5019055	26	4.5771	ng/mL	----
N-MeFOSA	M	5.617	1006	501213	1	0.0076	ng/mL	----
N-MeFOSE-d7	Auto	5.588	716632	5019055	26	4.5051	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.588	716632	716632	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	716632	20	----	ng/mL	----

Insight Report

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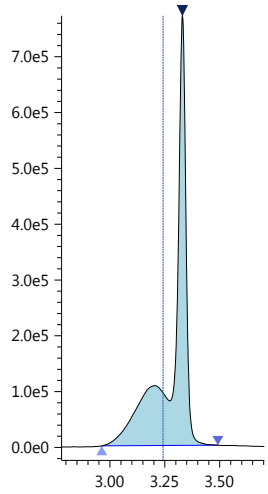
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	ND(W/B)	----	----	709350	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.092	709350	709350	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.092	709350	5019055	26	4.8514	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.754	803164	803164	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.754	803164	5019055	26	4.3742	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	803164	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.720	736028	736028	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.720	736028	5019055	26	4.2873	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	736028	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.072	5019055	5019055	26	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	934519	16	----	ng/mL	----
PFNS	ND(W/B)	----	----	696574	13	----	ng/mL	----

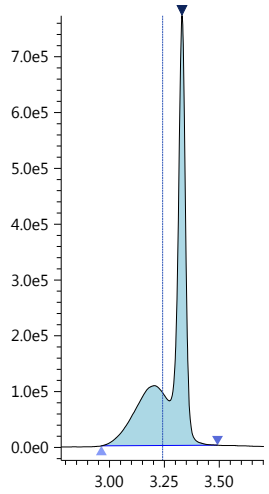
PFBA-13C_IS

Conc 5.0000
RT 3.330 Area 2965447
ISTD 216.90>172.15 (-) 7.73e5



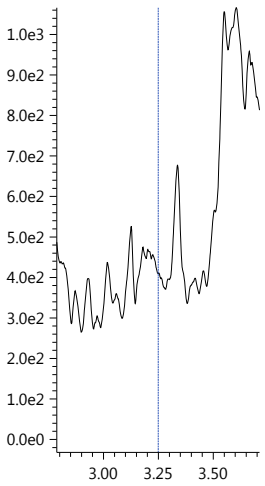
PFBA-13C

Conc 4.6045
RT 3.330 Area 2965447
Q 216.90>172.15 (-) 7.73e5



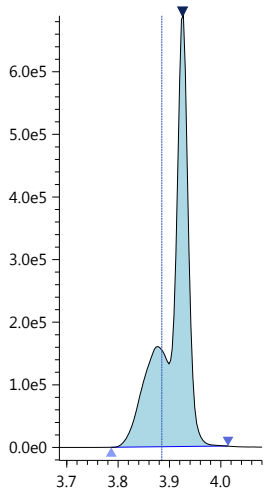
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.07e3



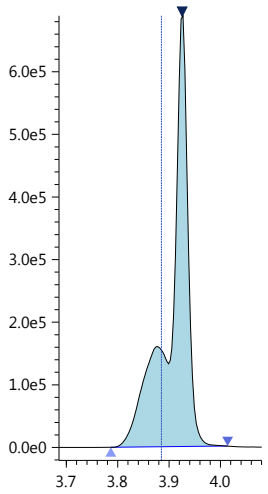
PFPeA-13C_IS

Conc 5.0000
RT 3.925 Area 1654193
ISTD 267.90>223.00 (-) 6.89e5



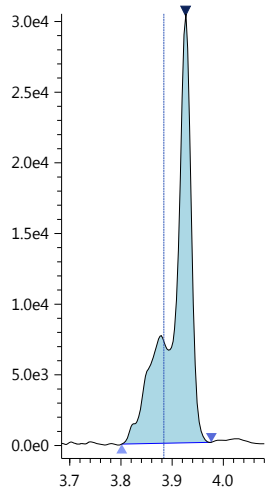
PFPeA-13C

Conc 4.6092
RT 3.925 Area 1654193
Q 267.90>223.00 (-) 6.89e5



PFPeA

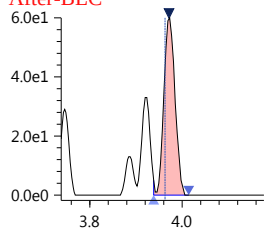
Conc 0.0095
RT 3.926 Area 74542
Q 263.05>219.10 (-) 3.05e4



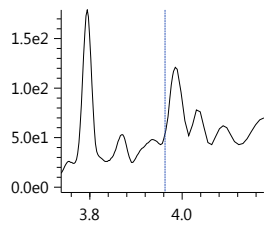
PFBS_1

Conc 0.0005
RT 3.972 Area 101
R#1 28.38 (0.00)
Q 299.00>80.00 (-) 6.00e1

After-BLC

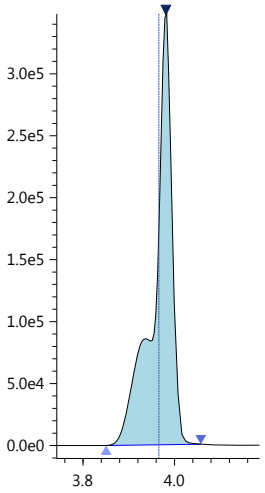


R1 298.80>99.00 (-) 1.79e2



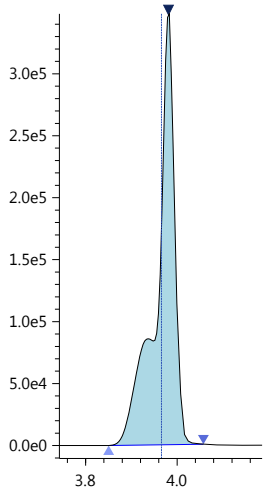
PFBS-13C

Conc 4.6527
RT 3.981 Area 934519
Q 301.80>80.00 (-) 3.48e5



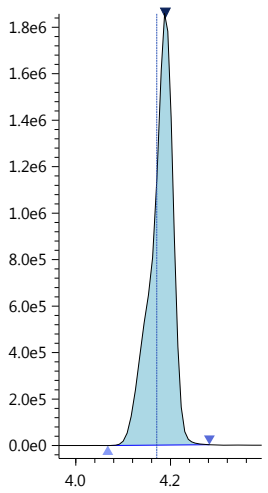
PFBS-13C_IS

Conc 5.0000
RT 3.981 Area 934519
ISTD 301.80>80.00 (-) 3.48e5



PFHxA-13C_IS

Conc 5.0000
RT 4.189 Area 5697186
ISTD 314.90>270.10 (-) 1.86e6



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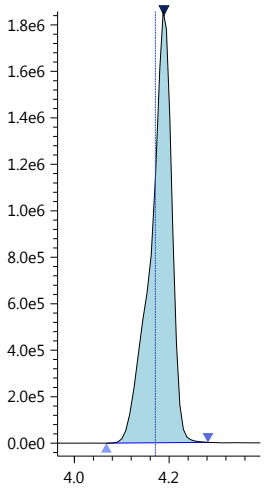
PFHxA-13C

Conc 4.7538
RT 4.189 Area 5697186

Q 314.90>270.10 (-) 1.86e6

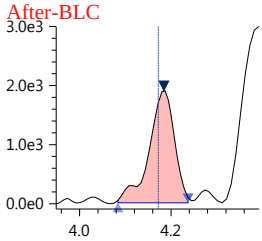


PFHxA

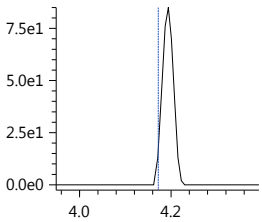
Conc 0.0052
RT 4.184 Area 7312
R#1 2.14 (0.00)

Q 313.00>269.00 (-) 3.00e3

After-BLC



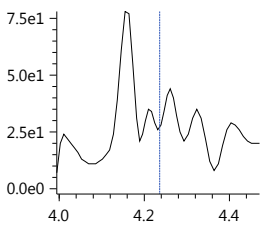
R1 313.00>119.10 (-) 8.50e1



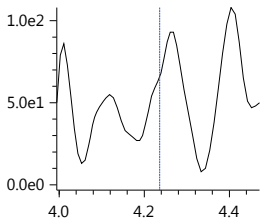
HPFO_DA

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

Q 329.00>169.00 (-) 7.80e1



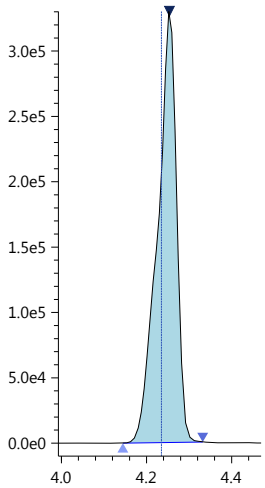
R1 329.00>285.10 (-) 1.08e2



HFPO_DA-13C_IS

Conc 5.0000
RT 4.254 Area 1023824

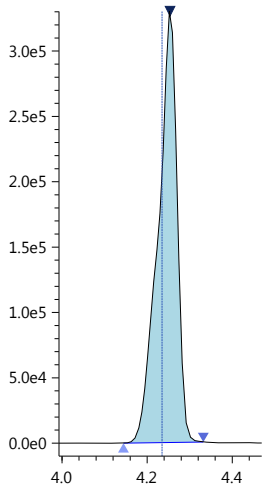
ISTD 332.00>286.80 (-) 3.30e5



HFPO_DA-13C

Conc 4.7959
RT 4.254 Area 1023824

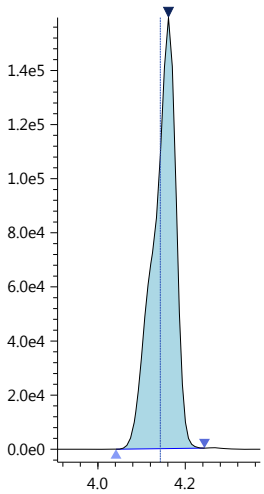
Q 332.00>286.80 (-) 3.30e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.161 Area 558329

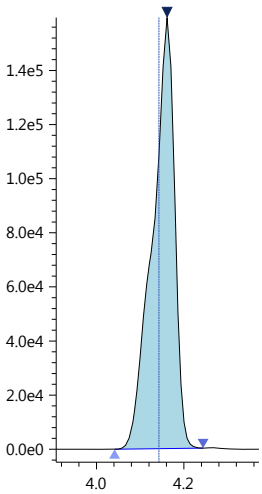
ISTD 328.80>309.05 (-) 1.60e5



4_2-FTS-13C

Conc 4.5281
RT 4.161 Area 558329

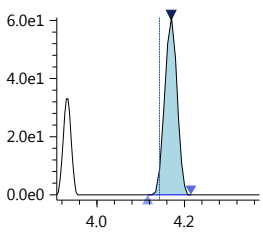
Q 328.80>309.05 (-) 1.60e5



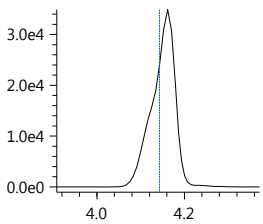
4_2-FTS_1

Conc 0.0013
RT 4.170 Area 122
R#1 40981.36 (0.00)

Q 327.00>307.05 (-) 6.10e1



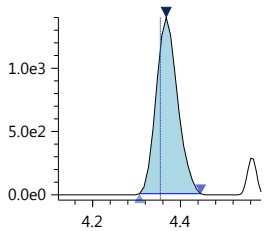
R1 327.00>81.10 (-) 3.49e4



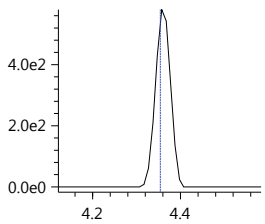
PFHpA

Conc 0.0040
RT 4.368 Area 4735
R#1 37.95 (0.00)

Q 362.90>319.00 (-) 1.40e3



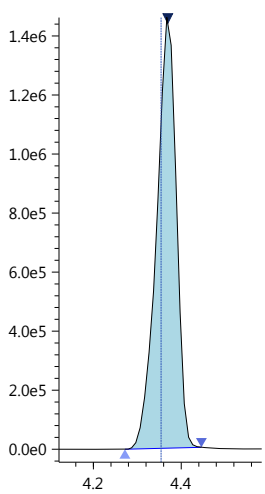
R1 362.90>169.00 (-) 5.80e2



PFHpA-13C_IS

Conc 5.0000
RT 4.370 Area 4582216

ISTD 366.90>322.10 (-) 1.46e6



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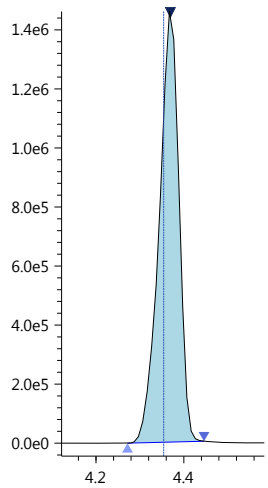
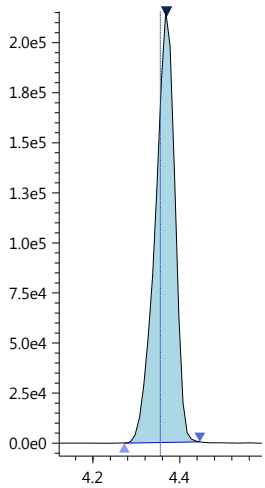
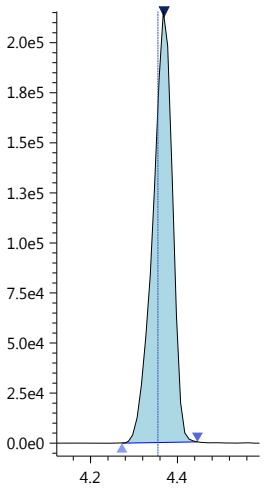
PFHpA-13C
Conc 5.0969
RT 4.370 Area 4582216
Q 366.90>322.10 (-) 1.46e6



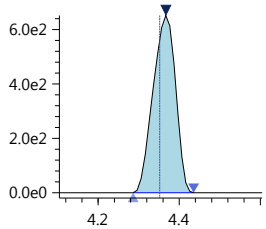
PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 680598
ISTD 402.70>84.05 (-) 2.16e5



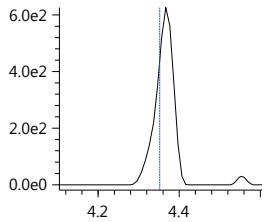
PFHxS-18O
Conc 4.9115
RT 4.369 Area 680598
Q 402.70>84.05 (-) 2.16e5



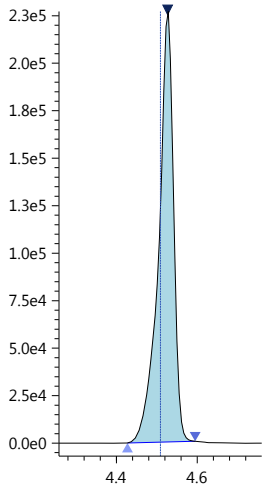
PFHxS_1
Conc 0.0193
RT 4.367 Area 2526
R#1 93.63 (0.00)
Q 399.00>80.00 (-) 6.52e2



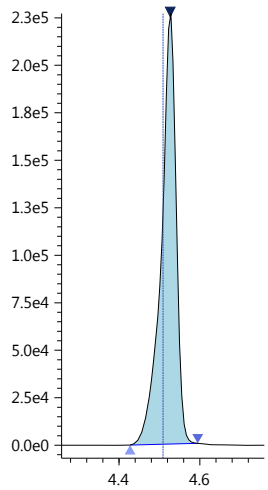
R1 399.00>99.00 (-) 6.26e2



6_2-FTS-13C
Conc 4.6327
RT 4.527 Area 577566
Q 428.90>409.00 (-) 2.27e5

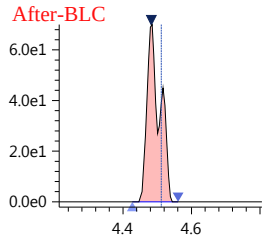


6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 577566
ISTD 428.90>409.00 (-) 2.27e5

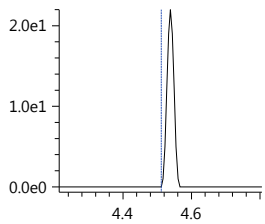


6_2-FTS_1
Conc 0.0017
RT 4.483 Area 185
R#1 0.00 (0.00)
Q 427.00>407.00 (-) 7.00e1

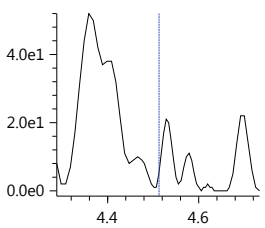
After-BLC



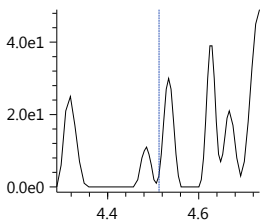
R1 427.00>80.90 (-) 2.20e1



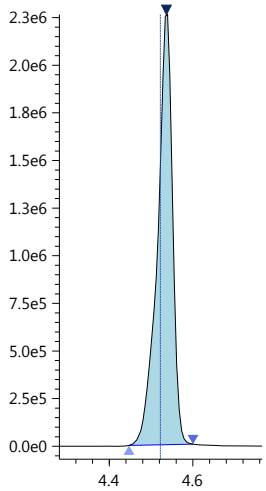
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 5.20e1



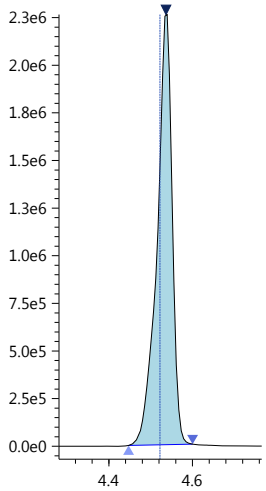
R1 449.00>99.20 (-) 4.90e1



PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 5659263
ISTD 416.80>372.05 (-) 2.27e6



PFOA-13C
Conc 4.7225
RT 4.537 Area 5659263
Q 416.80>372.05 (-) 2.27e6



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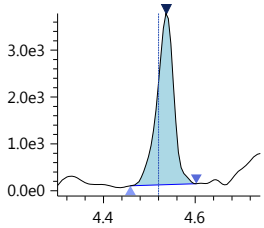
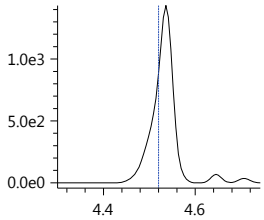
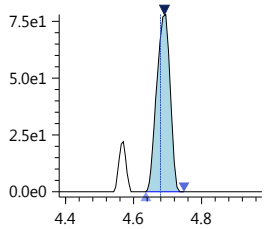
PFOA
Conc 0.0094
RT 4.537 Area 9374
R#1 39.60 (0.00)
Q 413.00>369.00 (-) 3.78e3



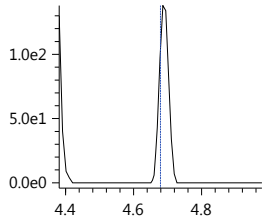
R1 413.00>169.10 (-) 1.43e3



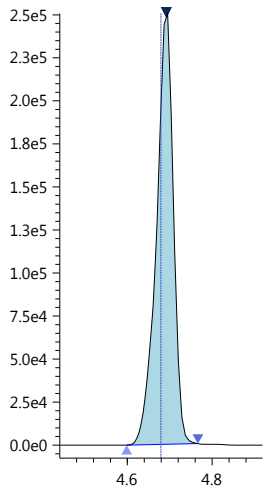
PFOS_1
Conc 0.0021
RT 4.691 Area 216
R#1 177.92 (0.00)
Q 499.00>80.00 (-) 7.80e1



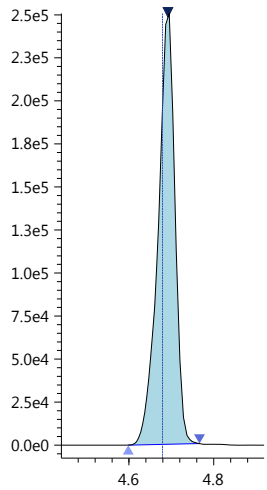
R1 499.00>99.00 (-) 1.38e2



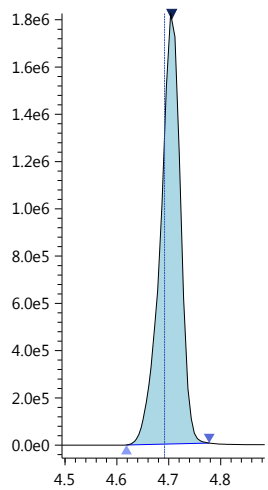
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 696574
ISTD 502.80>80.05 (-) 2.51e5



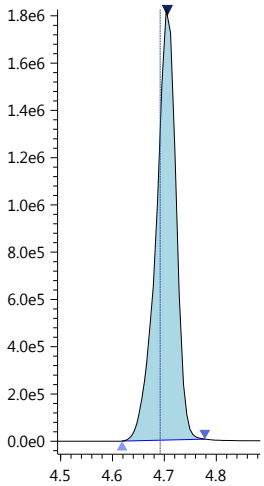
PFOS-13C
Conc 4.8164
RT 4.692 Area 696574
Q 502.80>80.05 (-) 2.51e5



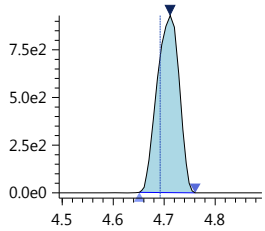
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4895319
ISTD 467.80>423.00 (-) 1.83e6



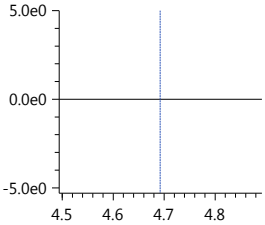
PFNA-13C
Conc 4.9095
RT 4.706 Area 4895319
Q 467.80>423.00 (-) 1.83e6



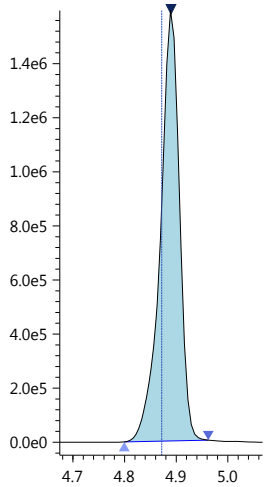
PFNA
Conc 0.0074
RT 4.712 Area 2848
R#1 0.00 (0.00)
Q 463.00>418.90 (-) 9.30e2



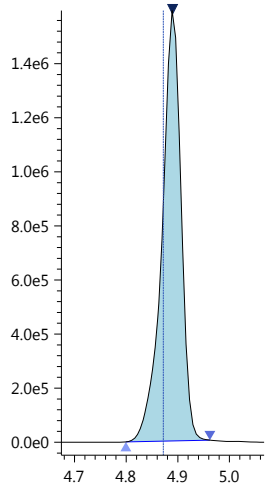
R1 463.00>219.00 (-) 0.00e0



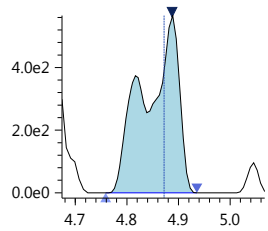
PFDA-13C_IS
Conc 5.0000
RT 4.890 Area 4094107
ISTD 514.80>469.95 (-) 1.60e6



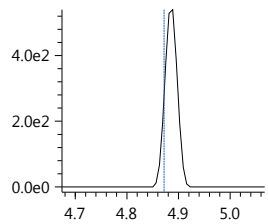
PFDA-13C
Conc 4.7034
RT 4.890 Area 4094107
Q 514.80>469.95 (-) 1.60e6



PFDA
Conc 0.0038
RT 4.888 Area 2576
R#1 96.77 (0.00)
Q 513.00>468.80 (-) 5.66e2



R1 513.00>219.10 (-) 5.40e2



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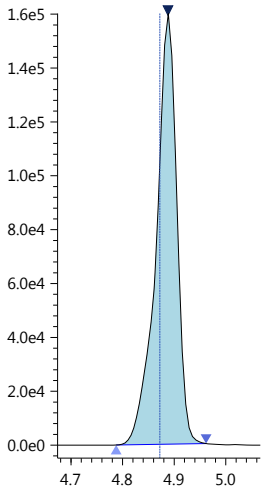
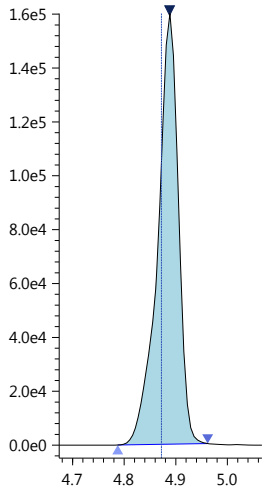
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 444874

ISTD 528.80>509.00 (-) 1.60e5



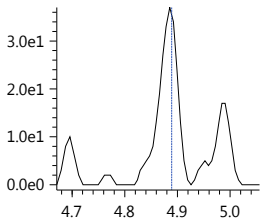
8_2-FTS-13C
Conc 4.5884
RT 4.888 Area 444874

Q 528.80>509.00 (-) 1.60e5

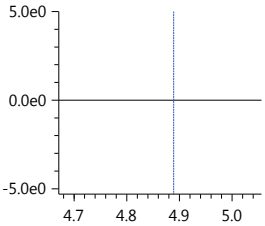


8_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 527.10>506.90 (-) 3.70e1

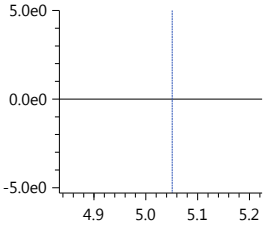


R1 527.20>487.00 (-) 0.00e0

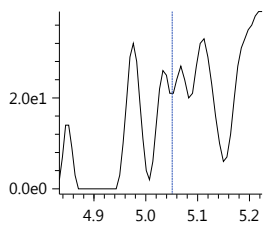


PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 599.00>79.90 (-) 0.00e0



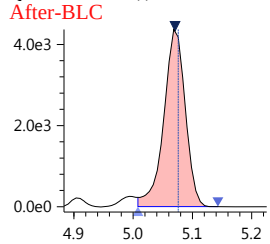
R1 599.00>99.10 (-) 3.90e1



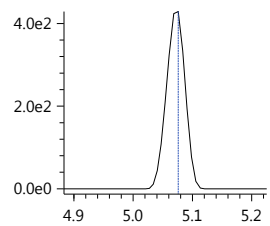
PFUnA
Conc 0.0167
RT 5.071 Area 10999
R#1 9.90 (0.00)

Q 563.00>518.90 (-) 4.37e3

After-BLC

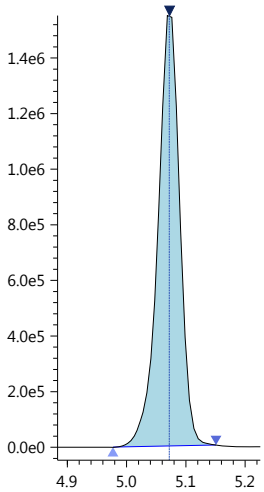


R1 563.00>219.00 (-) 4.29e2



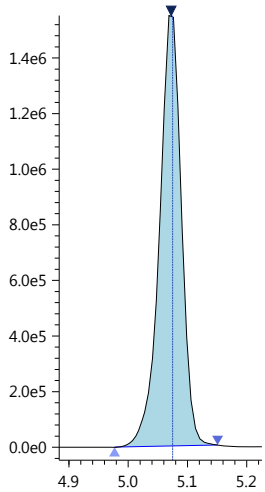
PFUnA-13C_IS
Conc 5.0000
RT 5.072 Area 3991942

ISTD 564.80>519.95 (-) 1.55e6



PFUnA-13C
Conc 4.9014
RT 5.072 Area 3991942

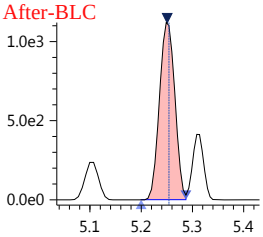
Q 564.80>519.95 (-) 1.55e6



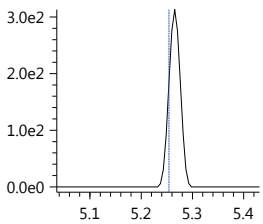
PFDoA
Conc 0.0135
RT 5.251 Area 2338
R#1 6.24 (0.00)

Q 613.05>569.00 (-) 1.12e3

After-BLC

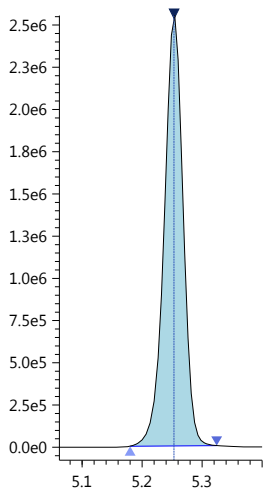


R1 613.05>169.00 (-) 3.13e2



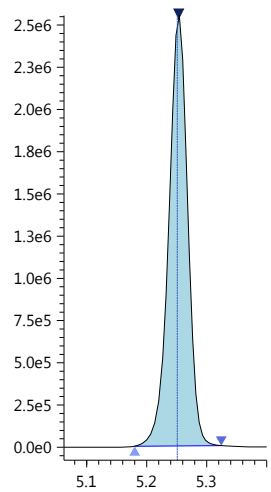
PFDoA-13C
Conc 4.7357
RT 5.253 Area 5596370

Q 614.80>569.95 (-) 2.56e6



PFDoA-13C_IS
Conc 5.0000
RT 5.253 Area 5596370

ISTD 614.80>569.95 (-) 2.56e6



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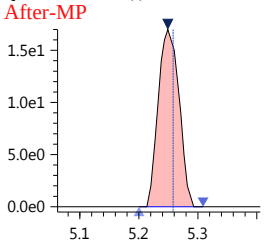
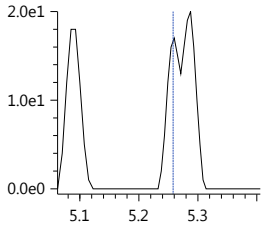
10_2-FtS_1

Conc 0.0007
RT 5.249 Area 42
R#1 72.22 (0.00)

Q 627.00>606.95 (-) 1.70e1



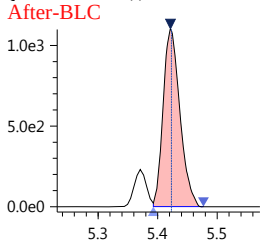
R1 627.00>81.25 (-) 2.00e1



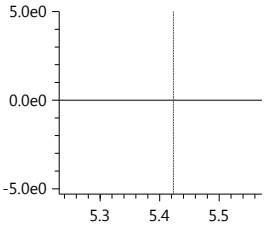
PFTrDA

Conc 0.0010
RT 5.421 Area 2151
R#1 0.00 (0.00)

Q 663.00>618.90 (-) 1.10e3



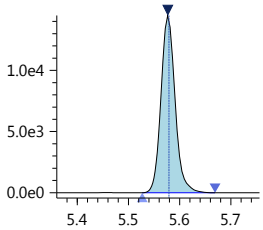
R1 662.90>169.00 (-) 0.00e0



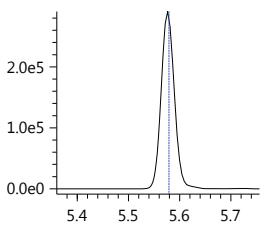
PFTeDA

Conc 0.0018
RT 5.577 Area 27706
R#1 2038.05 (0.00)

Q 713.40>669.00 (-) 1.45e4



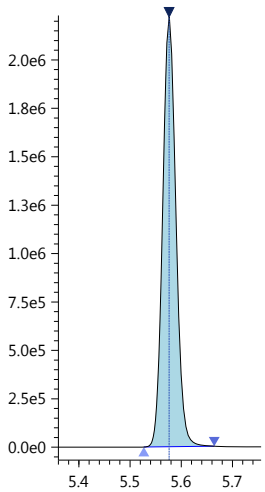
R1 713.40>169.10 (-) 2.91e5



PFTeDA-13C

Conc 4.7197
RT 5.576 Area 3990940

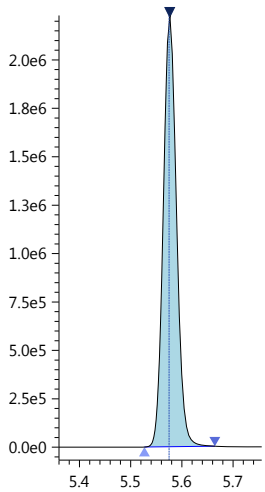
Q 714.70>669.90 (-) 2.23e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.576 Area 3990940

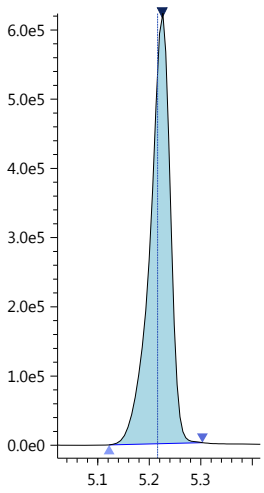
ISTD 714.70>669.90 (-) 2.23e6



FOSA-13C_IS

Conc 5.0000
RT 5.225 Area 1698327

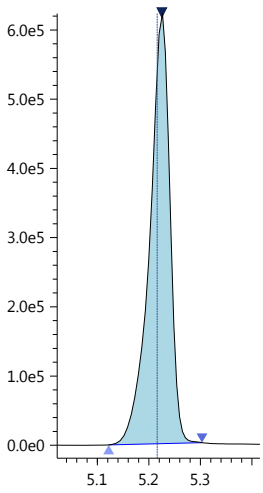
ISTD 506.00>78.05 (-) 6.24e5



FOSA-13C

Conc 4.4133
RT 5.225 Area 1698327

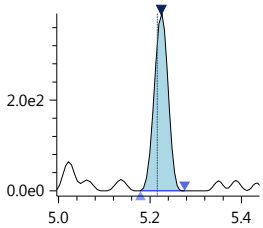
Q 506.00>78.05 (-) 6.24e5



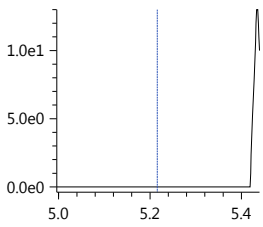
FOSA

Conc 0.0018
RT 5.225 Area 836
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 3.91e2



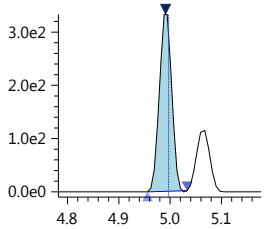
R1 498.20>64.10 (-) 1.30e1



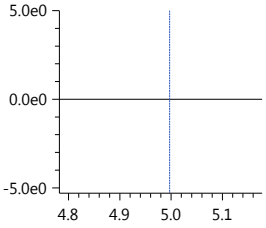
N-MeFOSAA

Conc 0.0077
RT 4.991 Area 561
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 3.33e2



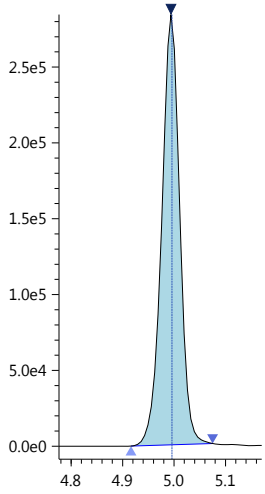
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 4.5445
RT 4.994 Area 692125

Q 572.80>419.05 (-) 2.85e5



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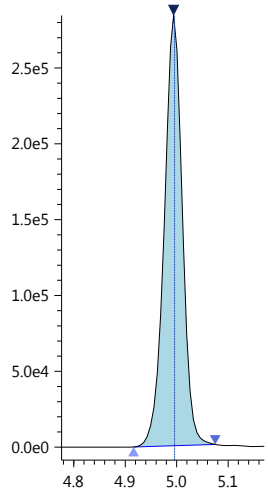
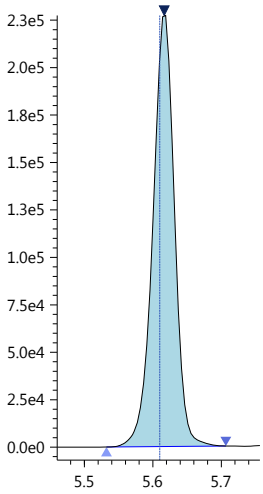
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 692125

ISTD 572.80>419.05 (-) 2.85e5



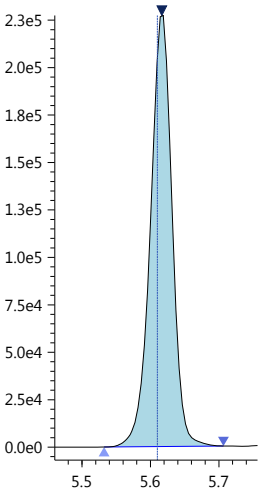
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 501213

ISTD 514.90>168.90 (-) 2.27e5



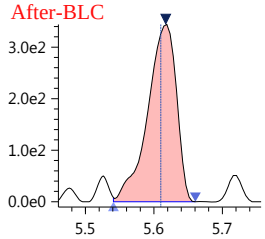
N-MeFOSA-d3
Conc 4.5771
RT 5.617 Area 501213

Q 514.90>168.90 (-) 2.27e5

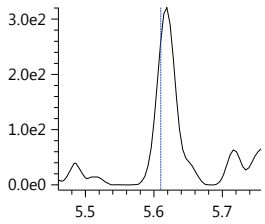


N-MeFOSA
Conc 0.0076
RT 5.617 Area 1006
R#1 95.99 (0.00)

Q 512.00>169.10 (-) 3.44e2

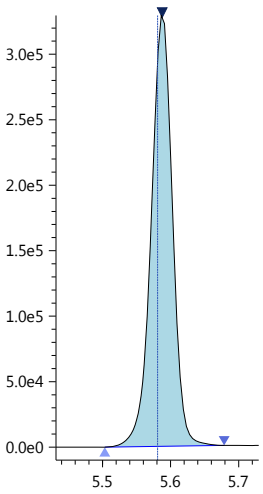


R1 512.00>219.00 (-) 3.21e2



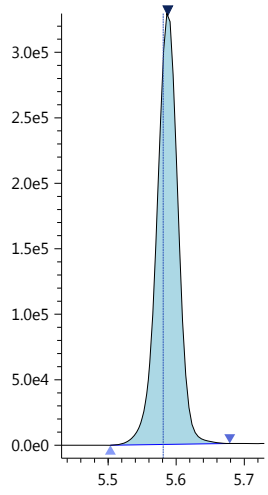
N-MeFOSE-d7
Conc 4.5051
RT 5.588 Area 716632

Q 622.70>59.10 (-) 3.30e5



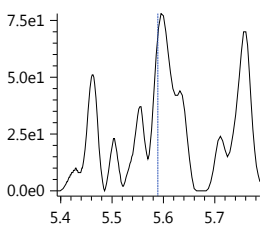
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 716632

ISTD 622.70>59.10 (-) 3.30e5

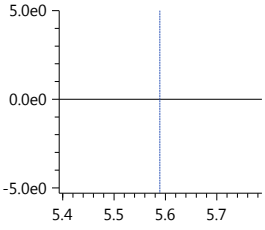


N-MeFOSE
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 616.00>59.00 (-) 7.80e1

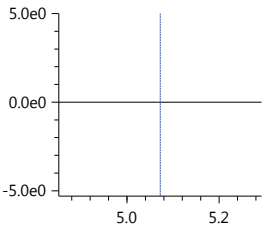


R1 556.00>121.20 (-) 0.00e0

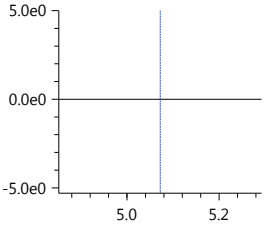


N-EtFOSAA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 584.20>418.95 (-) 0.00e0

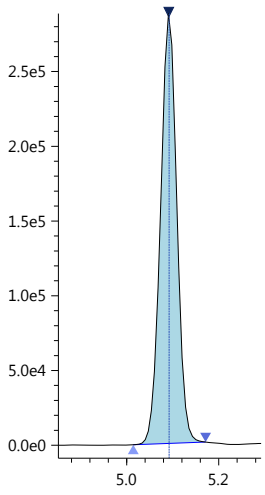


R1 584.20>526.10 (-) 0.00e0



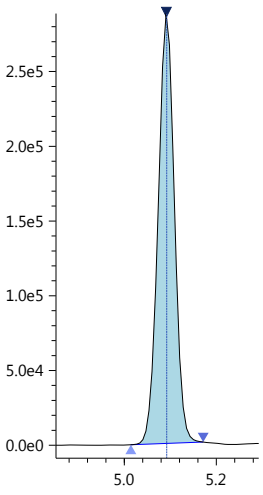
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 709350

ISTD 588.80>419.00 (-) 2.89e5



N-EtFOSAA-d5
Conc 4.8514
RT 5.092 Area 709350

Q 588.80>419.00 (-) 2.89e5



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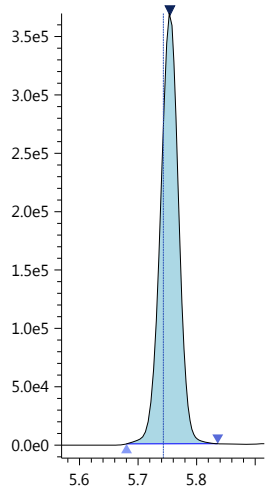
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.754 Area 803164

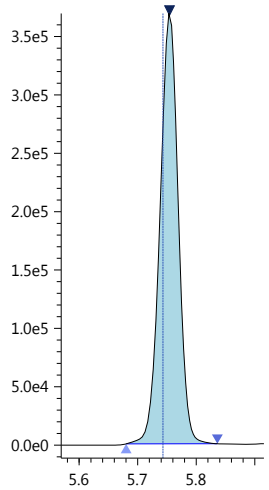
ISTD 530.90>169.15 (-) 3.70e5



N-EtFOSA-d9

Conc 4.3742
RT 5.754 Area 803164

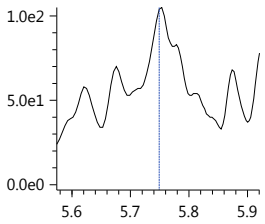
Q 530.90>169.15 (-) 3.70e5



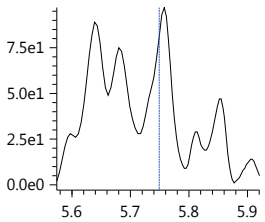
N-EtFOSA

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

Q 526.90>169.10 (-) 1.05e2



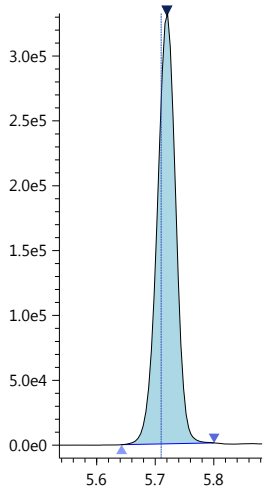
R1 526.90>219.00 (-) 9.70e1



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.720 Area 736028

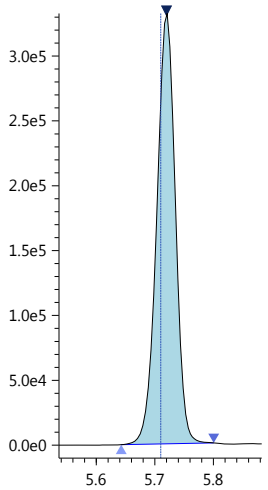
ISTD 638.70>59.10 (-) 3.33e5



N-EtFOSE-d9

Conc 4.2873
RT 5.720 Area 736028

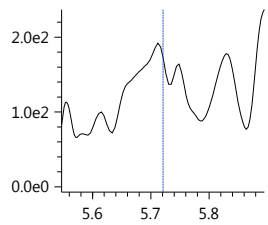
Q 638.70>59.10 (-) 3.33e5



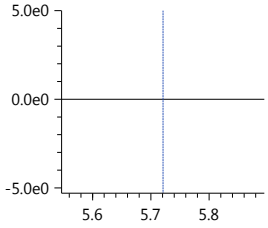
N-EtFOSE

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

Q 630.00>58.90 (-) 2.37e2



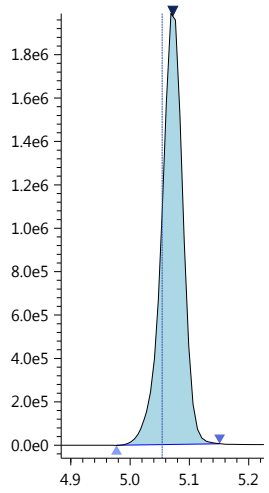
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.072 Area 5019055

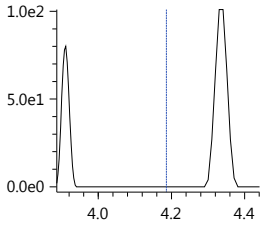
ISTD 570.00>525.00 (-) 1.99e6



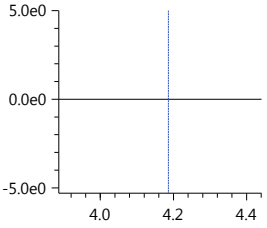
PFPeS

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

Q 349.00>99.00 (-) 1.01e2



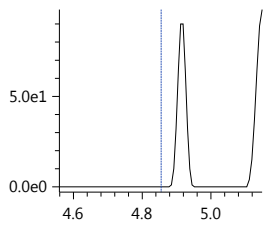
R1 349.00>79.95 (-) 0.00e0



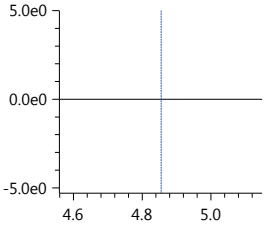
PFNS

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

Q 549.00>99.00 (-) 9.80e1



R1 549.00>79.95 (-) 0.00e0



Insight Report

Printed at 1/7/2019 10:13:37 AM

010419_025

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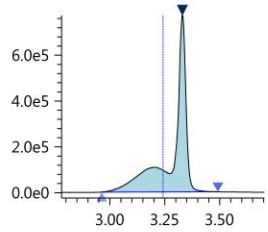
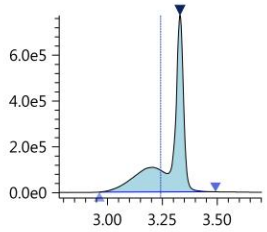
Date acquired: 1/4/2019 6:40:21 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_025.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

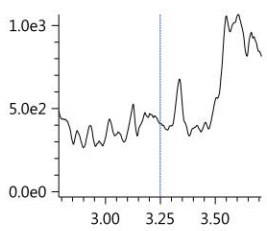
PFBA-13C_IS
Conc 5.0000
RT 3.330 Area 2965447
ISTD 216.90>172.15 (-) 7.73e5



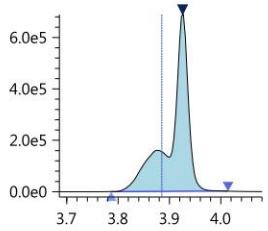
PFBA-13C
Conc 4.6045
RT 3.330 Area 2965447
Q 216.90>172.15 (-) 7.73e5



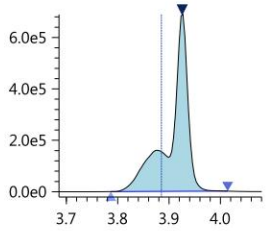
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.07e3



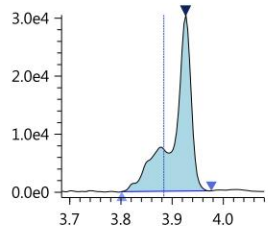
PFPeA-13C_IS
Conc 5.0000
RT 3.925 Area 1654193
ISTD 267.90>223.00 (-) 6.89e5



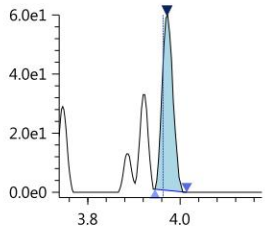
PFPeA-13C
Conc 4.6092
RT 3.925 Area 1654193
Q 267.90>223.00 (-) 6.89e5



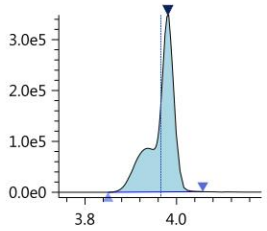
PFPeA
Conc 0.0658
RT 3.926 Area 74542
Q 263.05>219.10 (-) 3.05e4



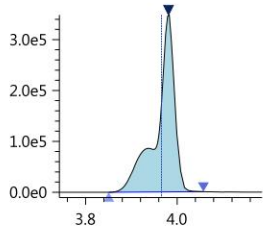
PFBS_1
Conc 0.0005
RT 3.972 Area 98
Q 299.00>80.00 (-) 6.00e1



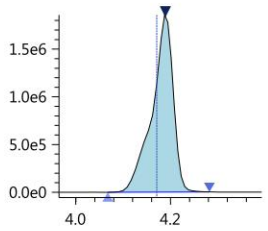
PFBS-13C
Conc 4.6527
RT 3.981 Area 934519
Q 301.80>80.00 (-) 3.48e5



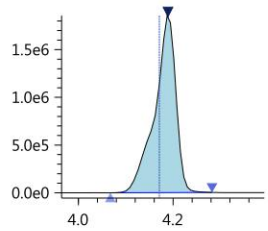
PFBS-13C_IS
Conc 5.0000
RT 3.981 Area 934519
ISTD 301.80>80.00 (-) 3.48e5



PFHxA-13C_IS
Conc 5.0000
RT 4.189 Area 5697186
ISTD 314.90>270.10 (-) 1.86e6



PFHxA-13C
Conc 4.7538
RT 4.189 Area 5697186
Q 314.90>270.10 (-) 1.86e6



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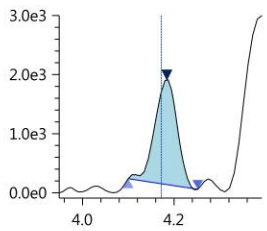
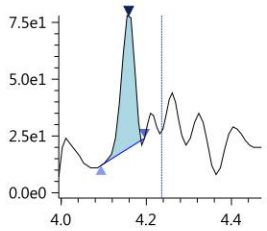
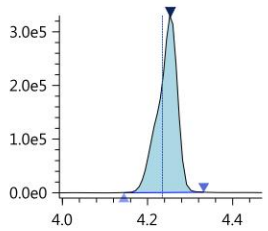
Conc 0.0059
RT 4.184 Area 6013
Q 313.00>269.00 (-) 3.00e3



HPFO_DA
Conc 0.0007
RT 4.159 Area 126
Q 329.00>169.00 (-) 7.80e1



HFPO_DA-13C_IS
Conc 5.0000
RT 4.254 Area 1023824
ISTD 332.00>286.80 (-) 3.30e5



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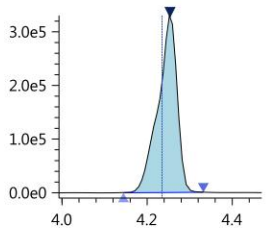
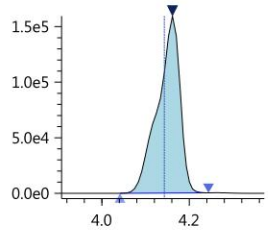
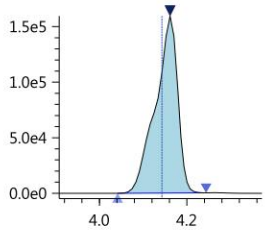
Conc 4.7959
RT 4.254 Area 1023824
Q 332.00>286.80 (-) 3.30e5



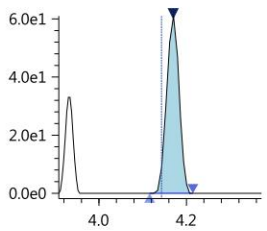
4_2-FTS-13C_IS
Conc 5.0000
RT 4.161 Area 558329
ISTD 328.80>309.05 (-) 1.60e5



4_2-FTS-13C
Conc 4.5281
RT 4.161 Area 558329
Q 328.80>309.05 (-) 1.60e5



4_2-FTS_1
Conc 0.0013
RT 4.170 Area 122
Q 327.00>307.05 (-) 6.10e1



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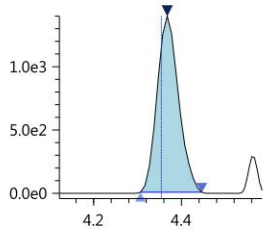
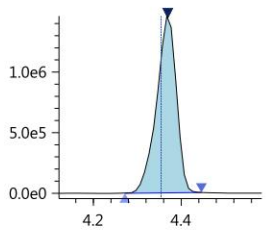
Conc 0.0048
RT 4.368 Area 4735
Q 362.90>319.00 (-) 1.40e3



PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 4582216
ISTD 366.90>322.10 (-) 1.46e6



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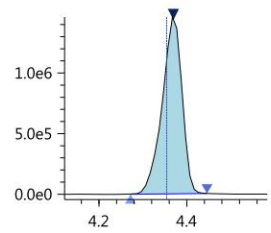
PFHpA-13C
Conc 5.0969
RT 4.370 Area 4582216
Q 366.90>322.10 (-) 1.46e6



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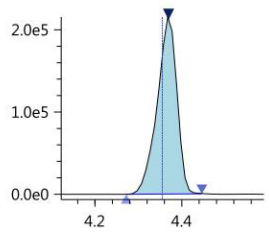
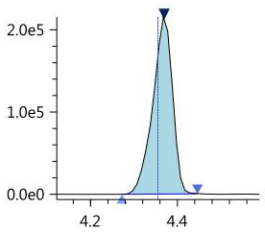
RT 4.369 Area 680598
ISTD 402.70>84.05 (-) 2.16e5



PFHxS-18O
Conc 4.9115
RT 4.369 Area 680598
Q 402.70>84.05 (-) 2.16e5



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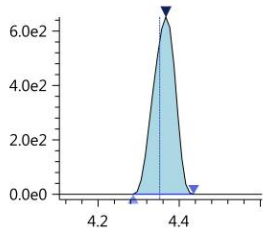
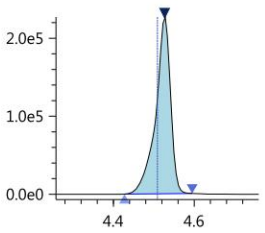
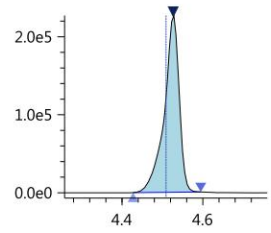
Conc 0.0194
RT 4.367 Area 2526
Q 399.00>80.00 (-) 6.52e2



6_2-FTS-13C
Conc 4.6327
RT 4.527 Area 577566
Q 428.90>409.00 (-) 2.27e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.527 Area 577566
ISTD 428.90>409.00 (-) 2.27e5



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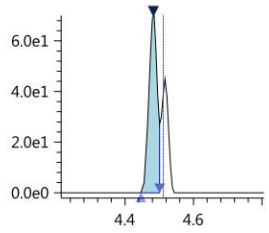
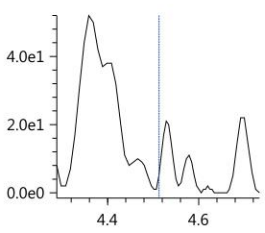
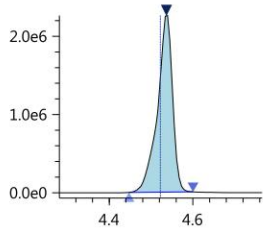
Conc 0.0011
RT 4.483 Area 119
Q 427.00>407.00 (-) 7.00e1



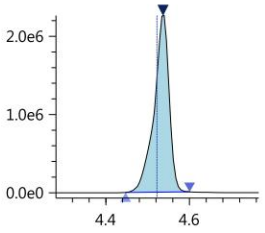
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 5.20e1



PFOA-13C_IS
Conc 5.0000
RT 4.537 Area 5659263
ISTD 416.80>372.05 (-) 2.27e6



PFOA-13C
Conc 4.7225
RT 4.537 Area 5659263
Q 416.80>372.05 (-) 2.27e6



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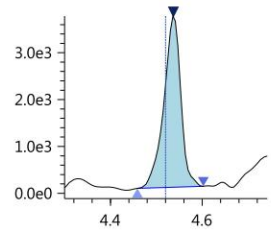
Conc 0.0100
RT 4.537 Area 9374
Q 413.00>369.00 (-) 3.78e3



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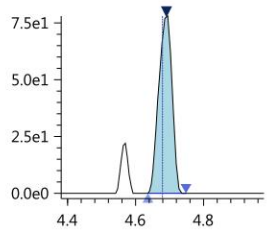
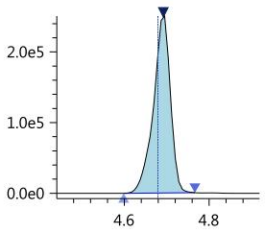
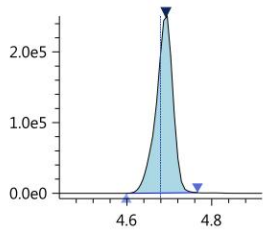
Conc 0.0022
RT 4.691 Area 216
Q 499.00>80.00 (-) 7.80e1



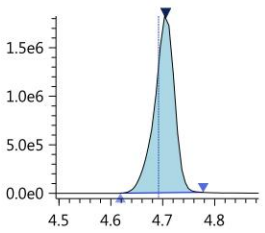
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 696574
ISTD 502.80>80.05 (-) 2.51e5



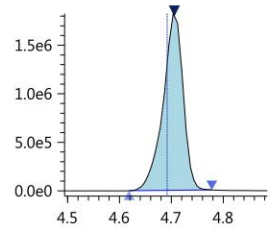
PFOS-13C
Conc 4.8164
RT 4.692 Area 696574
Q 502.80>80.05 (-) 2.51e5



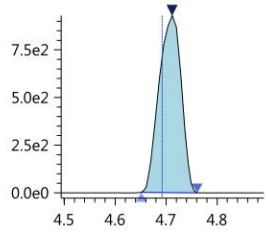
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4895319
ISTD 467.80>423.00 (-) 1.83e6



PFNA-13C
Conc 4.9095
RT 4.706 Area 4895319
Q 467.80>423.00 (-) 1.83e6



PFNA
Conc 0.0044
RT 4.712 Area 2848
Q 463.00>418.90 (-) 9.30e2



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Conc 5.0000
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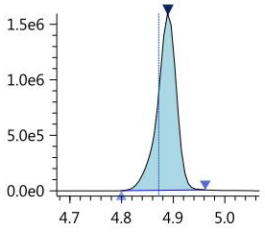
ISTD 514.80>469.95 (-) 1.60e6



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Conc 4.7034
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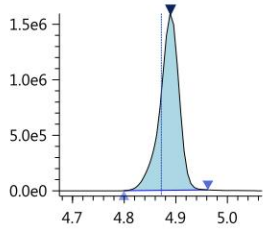
Q 514.80>469.95 (-) 1.60e6



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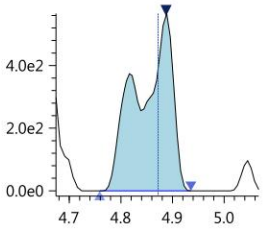
RT 4.888 Area 2576
Q 513.00>468.80 (-) 5.66e2



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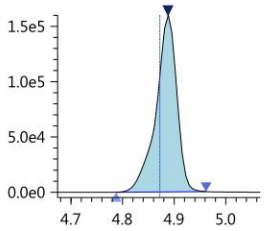
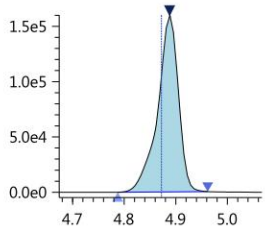
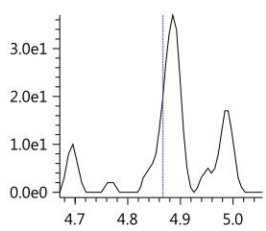
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 444874
ISTD 528.80>509.00 (-) 1.60e5



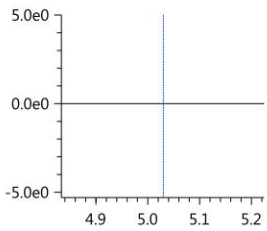
8_2-FTS-13C
Conc 4.5884
RT 4.888 Area 444874
Q 528.80>509.00 (-) 1.60e5



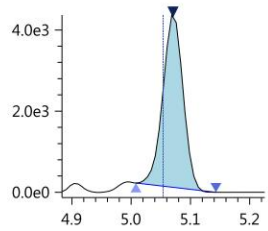
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 3.70e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0156
RT 5.071 Area 10112
Q 563.00>518.90 (-) 4.37e3



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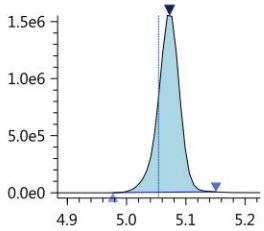
Conc 5.0000
RT 5.072 Area 3991942
ISTD 564.80>519.95 (-) 1.55e6



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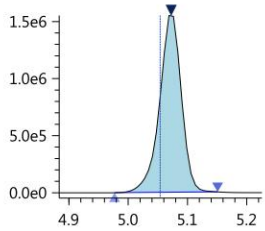
RT 5.072 Area 3991942
Q 564.80>519.95 (-) 1.55e6



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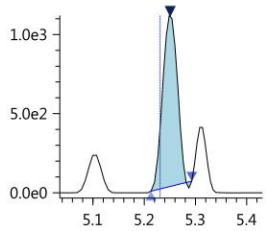
Conc 0.0037
RT 5.251 Area 2158
Q 613.05>569.00 (-) 1.12e3



PFDoA-13C
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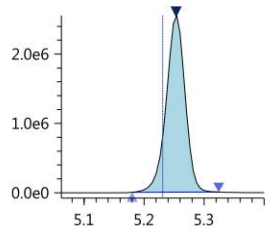
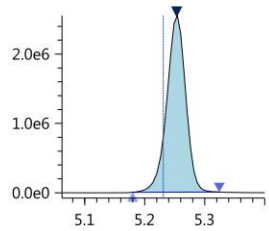
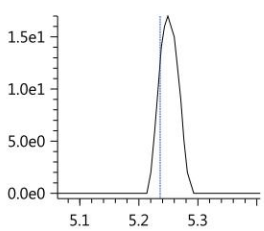
RT 5.253 Area 5596370
Q 614.80>569.95 (-) 2.56e6



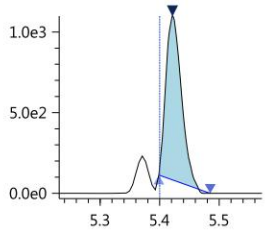
PFDoA-13C_IS
Conc 5.0000
RT 5.253 Area 5596370
ISTD 614.80>569.95 (-) 2.56e6



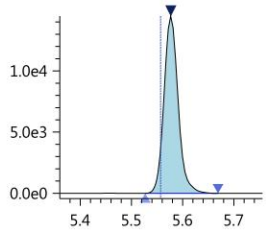
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.70e1



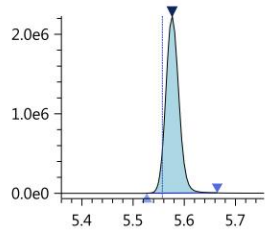
PFTrDA
Conc 0.0025
RT 5.421 Area 1840
Q 663.00>618.90 (-) 1.10e3



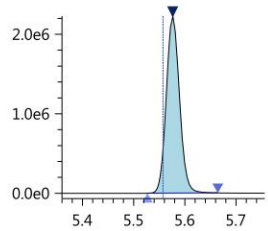
PFTeDA
Conc 0.0738
RT 5.577 Area 27706
Q 713.40>669.00 (-) 1.45e4



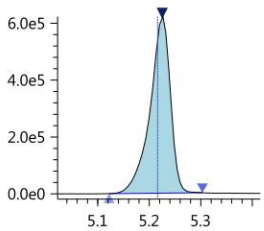
PFTeDA-13C
Conc 4.7197
RT 5.576 Area 3990940
Q 714.70>669.90 (-) 2.23e6



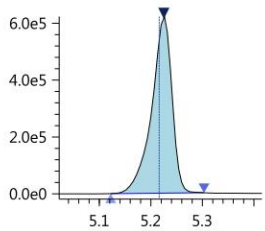
PFTeDA-13C_IS
Conc 5.0000
RT 5.576 Area 3990940
ISTD 714.70>669.90 (-) 2.23e6



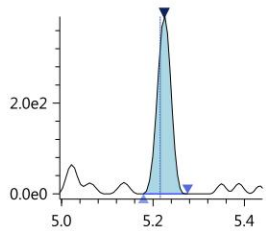
FOSA-13C_IS
Conc 5.0000
RT 5.225 Area 1698327
ISTD 506.00>78.05 (-) 6.24e5



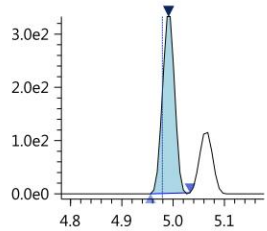
FOSA-13C
Conc 4.4133
RT 5.225 Area 1698327
Q 506.00>78.05 (-) 6.24e5



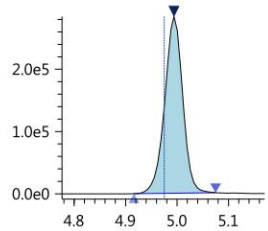
FOSA
Conc 0.0018
RT 5.225 Area 836
Q 498.20>78.00 (-) 3.91e2



N-MeFOSAA
Conc 0.0089
RT 4.991 Area 561
Q 570.20>419.00 (-) 3.33e2



N-MeFOSAA-d3
Conc 4.5445
RT 4.994 Area 692125
Q 572.80>419.05 (-) 2.85e5



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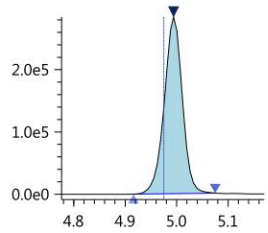
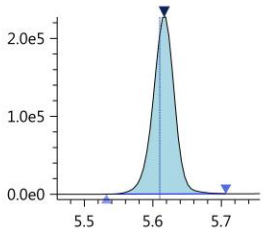
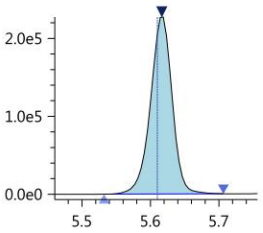
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 692125
ISTD 572.80>419.05 (-) 2.85e5



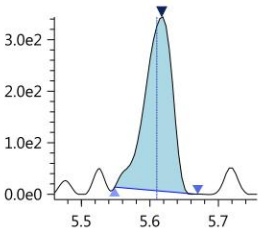
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 501213
ISTD 514.90>168.90 (-) 2.27e5



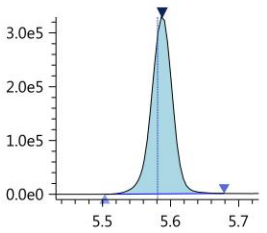
N-MeFOSA-d3
Conc 4.5771
RT 5.617 Area 501213
Q 514.90>168.90 (-) 2.27e5



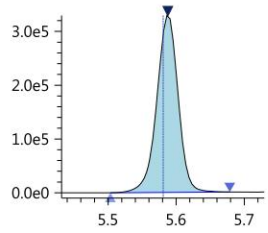
N-MeFOSA
Conc 0.0072
RT 5.617 Area 951
Q 512.00>169.10 (-) 3.44e2



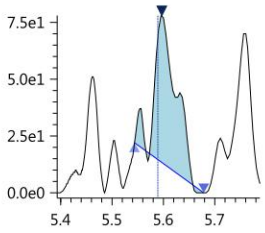
N-MeFOSE-d7
Conc 4.5051
RT 5.588 Area 716632
Q 622.70>59.10 (-) 3.30e5



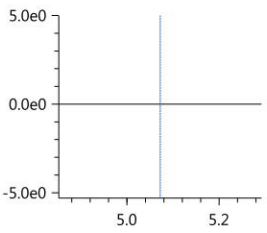
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 716632
ISTD 622.70>59.10 (-) 3.30e5



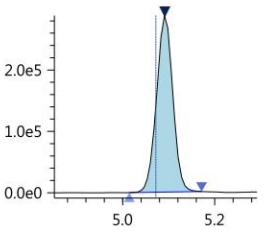
N-MeFOSE
Conc 0.0009
RT 5.597 Area 190
Q 616.00>59.00 (-) 7.80e1



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 709350
ISTD 588.80>419.00 (-) 2.89e5



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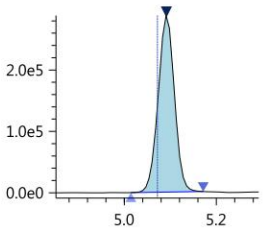
Conc 4.8514
RT 5.092 Area 709350
Q 588.80>419.00 (-) 2.89e5



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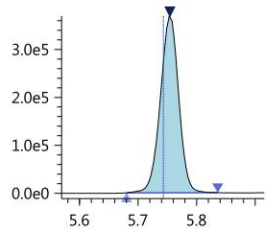
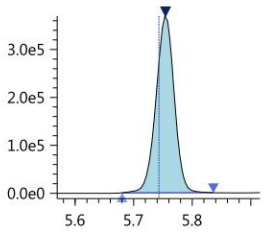
Conc 5.0000
RT 5.754 Area 803164
ISTD 530.90>169.15 (-) 3.70e5



N-EtFOSA-d9
Conc 4.3742
RT 5.754 Area 803164
Q 530.90>169.15 (-) 3.70e5



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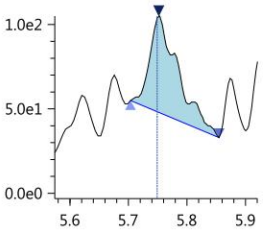
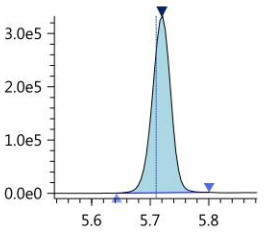
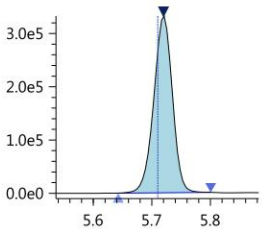
Conc 0.0069
RT 5.752 Area 192
Q 526.90>169.10 (-) 1.05e2



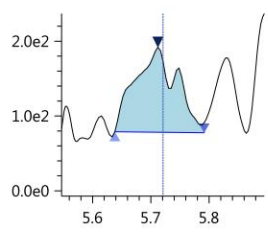
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.720 Area 736028
ISTD 638.70>59.10 (-) 3.33e5



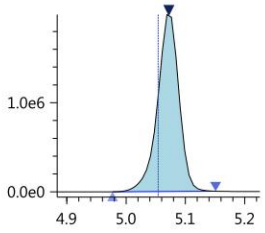
N-EtFOSE-d9
Conc 4.2873
RT 5.720 Area 736028
Q 638.70>59.10 (-) 3.33e5



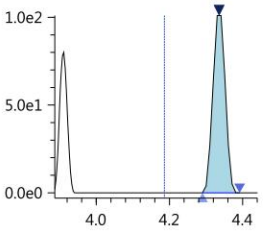
N-EtFOSE
Conc 0.0032
RT 5.712 Area 564
Q 630.00>58.90 (-) 2.37e2



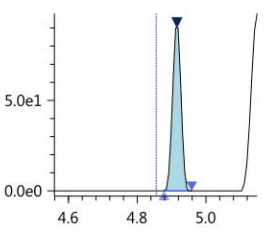
13C7-PFUnDA_IS
Conc 5.0000
RT 5.072 Area 5019055
ISTD 570.00>525.00 (-) 1.99e6



PFPeS
Conc 0.0027
RT 4.336 Area 241
Q 349.00>99.00 (-) 1.01e2



PFNS
Conc 0.0019
RT 4.916 Area 158
Q 549.00>99.00 (-) 9.80e1



Insight Report

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010419_026

Sample ID: T-PFOA
Date acquired: 1/4/2019 6:50:46 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_026.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.328	1575	1575	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.328	1575	1147	26	10.6971	ng/mL	----
PFBA	ND(W/B)	----	----	1575	2	----	ng/mL	----
PFPeA-13C_IS	ND(W/B)	----	----	----	4	----	ng/mL	----
PFPeA-13C	ND(W/B)	----	----	1147	26	----	ng/mL	----
PFPeA	Auto	3.833	763	----	4	0.0000	ng/mL	----
PFBS_1	Auto	3.832	420	----	16	0.0000	ng/mL	----
PFBS-13C	ND(W/B)	----	----	1147	26	----	ng/mL	----
PFBS-13C_IS	ND(W/B)	----	----	----	16	----	ng/mL	----
PFHxA-13C_IS	Auto	4.185	475	475	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.185	475	1147	26	1.7352	ng/mL	----
PFHxA	Auto	4.159	4875	475	6	58.1712	ng/mL	----
HPFO_DA	Auto	4.249	3178	128	3	133.8302	ng/mL	----
HFPO_DA-13C_IS	Auto	4.243	128	128	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.243	128	1147	26	2.6249	ng/mL	----
4_2-FTS-13C_IS	ND(W/B)	----	----	----	5	----	ng/mL	----
4_2-FTS-13C	ND(W/B)	----	----	1147	26	----	ng/mL	----
4_2-FTS_1	ND(W/B)	----	----	----	5	----	ng/mL	----
PFHpA	Auto	4.345	10911	410	8	124.7085	ng/mL	----
PFHpA-13C_IS	Auto	4.378	410	410	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.378	410	1147	26	1.9939	ng/mL	----
PFHxS-18O_IS	ND(W/B)	----	----	----	7	----	ng/mL	----
PFHxS-18O	ND(W/B)	----	----	1147	26	----	ng/mL	----
PFHxS_1	ND(W/B)	----	----	----	7	----	ng/mL	----
6_2-FTS-13C	ND(W/B)	----	----	1147	26	----	ng/mL	----
6_2-FTS-13C_IS	ND(W/B)	----	----	----	10	----	ng/mL	----
6_2-FTS_1	Auto	4.765	142	----	10	0.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	----	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.541	401	401	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.541	401	1147	26	1.4622	ng/mL	----
PFOA	Auto	4.534	751483	401	9	11444.4336	ng/mL	----
PFOS_1	ND(W/B)	----	----	----	13	----	ng/mL	----
PFOS-13C_IS	ND(W/B)	----	----	----	13	----	ng/mL	----
PFOS-13C	ND(W/B)	----	----	1147	26	----	ng/mL	----
PFNA-13C_IS	Auto	4.681	240	240	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.681	240	1147	26	1.0525	ng/mL	----
PFNA	Auto	4.850	1448	240	11	45.2973	ng/mL	----
PFDA-13C_IS	Auto	4.873	996	996	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.873	996	1147	26	5.0083	ng/mL	----
PFDA	Auto	4.842	743	996	12	4.4528	ng/mL	----
8_2-FTS-13C_IS	ND(W/B)	----	----	----	15	----	ng/mL	----
8_2-FTS-13C	ND(W/B)	----	----	1147	26	----	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	----	15	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	----	13	----	ng/mL	----
PFUnA	Auto	5.119	853	1226	14	4.3041	ng/mL	----
PFUnA-13C_IS	Auto	5.069	1226	1226	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.069	1226	1147	26	6.5869	ng/mL	----
PFDoA	ND(W/B)	----	----	1430	17	----	ng/mL	----
PFDoA-13C	Auto	5.254	1430	1147	26	5.2943	ng/mL	----
PFDoA-13C_IS	Auto	5.254	1430	1430	17	5.0000	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	----	15	----	ng/mL	----
PFTrDA	Auto	5.471	392	2886	22	0.7565	ng/mL	----
PFTeDA	ND(W/B)	----	----	2886	22	----	ng/mL	----
PFTeDA-13C	Auto	5.573	2886	1147	26	14.9298	ng/mL	----
PFTeDA-13C_IS	Auto	5.573	2886	2886	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.141	421	421	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.141	421	1147	26	4.7857	ng/mL	----
FOSA	Auto	5.144	210	421	18	1.8682	ng/mL	----
N-MeFOSAA	Auto	4.985	378	3678	19	0.9804	ng/mL	----
N-MeFOSAA-d3	Auto	4.993	3678	1147	26	105.6418	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.993	3678	3678	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.609	117	117	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.609	117	1147	26	4.6591	ng/mL	----
N-MeFOSA	Auto	5.624	1629	117	1	52.9058	ng/mL	----
N-MeFOSE-d7	Auto	5.594	542	1147	26	14.9148	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.594	542	542	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.603	900	542	20	5.7135	ng/mL	----

Insight Report

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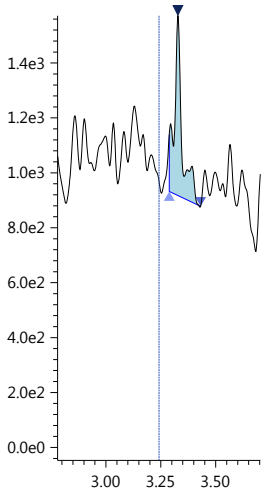
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.102	669	4600	21	1.6059	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.089	4600	4600	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.089	4600	1147	26	137.6352	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.632	195	195	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.632	195	1147	26	4.6530	ng/mL	----
N-EtFOSA	Auto	5.768	331	195	23	47.8482	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.769	687	687	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.769	687	1147	26	17.5014	ng/mL	----
N-EtFOSE	Auto	5.733	1182	687	24	7.0749	ng/mL	----
13C7-PFUnDA_IS	Auto	5.075	1147	1147	26	5.0000	ng/mL	----
PFPeS	Auto	4.225	85	----	16	0.0000	ng/mL	----
PFNS	ND(W/B)	----	----	----	13	----	ng/mL	----

PFBA-13C_IS

Conc 5.0000
RT 3.328 Area 1575

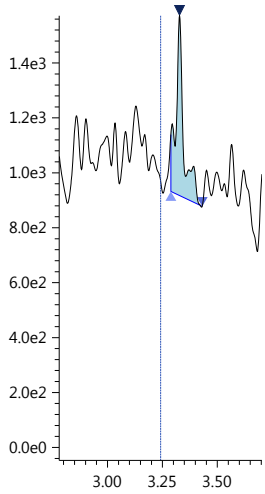
ISTD 216.90>172.15 (-) 1.57e3



PFBA-13C

Conc 10.6971
RT 3.328 Area 1575

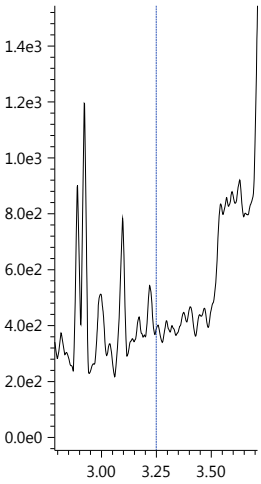
Q 216.90>172.15 (-) 1.57e3



PFBA

Conc ----
RT ---- Area ----

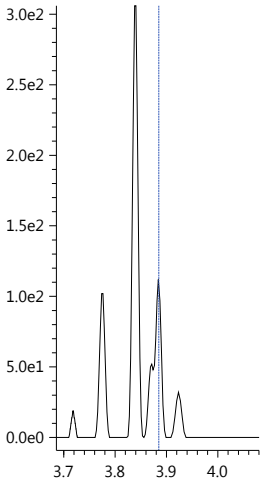
Q 213.00>169.10 (-) 1.54e3



PFPeA-13C_IS

Conc ----
RT ---- Area ----

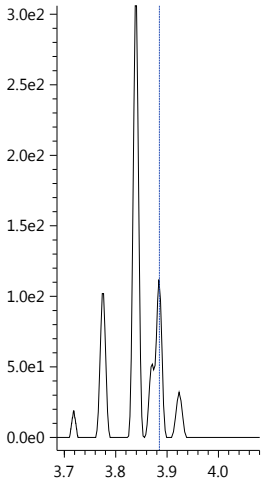
ISTD 267.90>223.00 (-) 3.06e2



PFPeA-13C

Conc ----
RT ---- Area ----

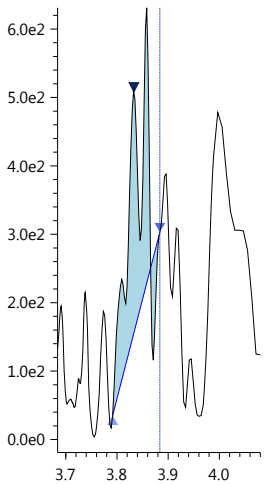
Q 267.90>223.00 (-) 3.06e2



PFPeA

Conc 0.0000
RT 3.833 Area 763

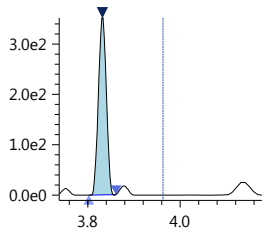
Q 263.05>219.10 (-) 6.31e2



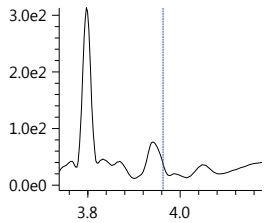
PFBS_1

Conc 0.0000
RT 3.832 Area 420
R#1 0.00 (0.00)

Q 299.00>80.00 (-) 3.52e2



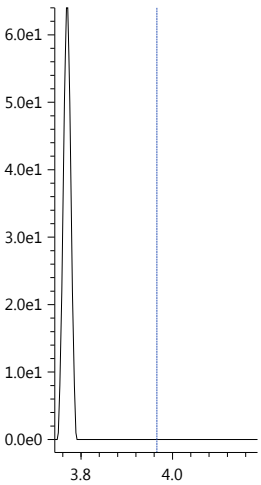
R1 298.80>99.00 (-) 3.13e2



PFBS-13C

Conc ----
RT ---- Area ----

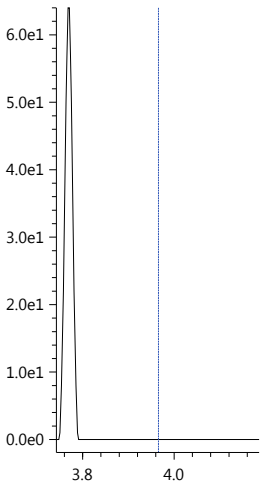
Q 301.80>80.00 (-) 6.40e1



PFBS-13C_IS

Conc ----
RT ---- Area ----

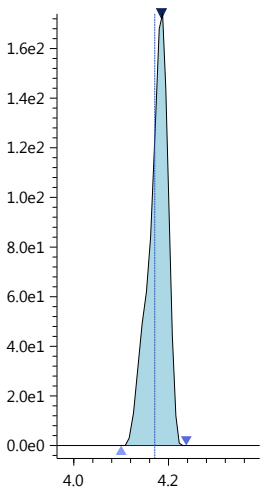
ISTD 301.80>80.00 (-) 6.40e1



PFHxA-13C_IS

Conc 5.0000
RT 4.185 Area 475

ISTD 314.90>270.10 (-) 1.74e2



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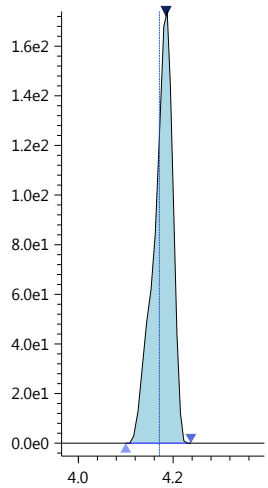
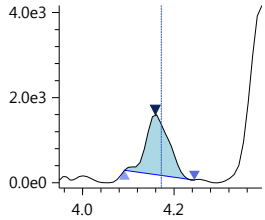
PFHxA-13C
Conc 1.7352
RT 4.185 Area 475

Q 314.90>270.10 (-) 1.74e2

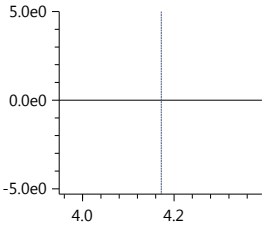


PFHxA
Conc 58.1712
RT 4.159 Area 4875
R#1 0.00 (0.00)

Q 313.00>269.00 (-) 4.17e3

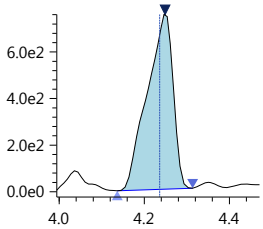


R1 313.00>119.10 (-) 0.00e0

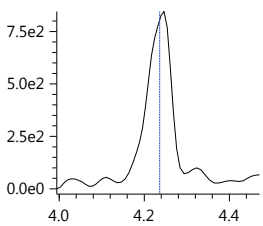


HPFO_DA
Conc 133.8302
RT 4.249 Area 3178
R#1 103.29 (0.00)

Q 329.00>169.00 (-) 7.61e2

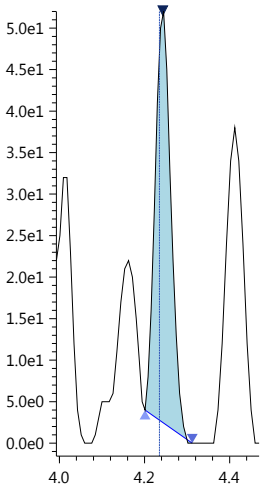


R1 329.00>285.10 (-) 8.45e2



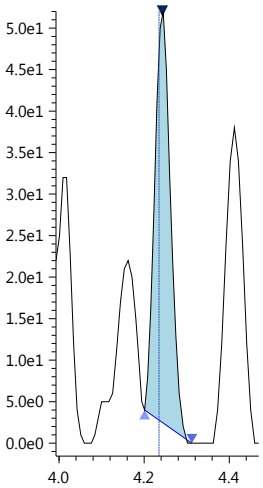
HFPO_DA-13C_IS
Conc 5.0000
RT 4.243 Area 128

ISTD 332.00>286.80 (-) 5.20e1



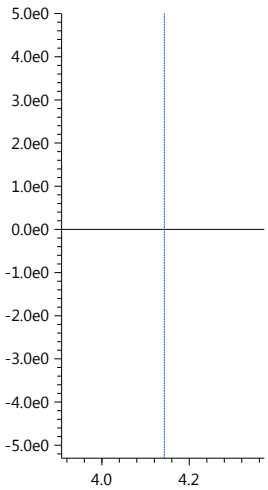
HFPO_DA-13C
Conc 2.6249
RT 4.243 Area 128

Q 332.00>286.80 (-) 5.20e1



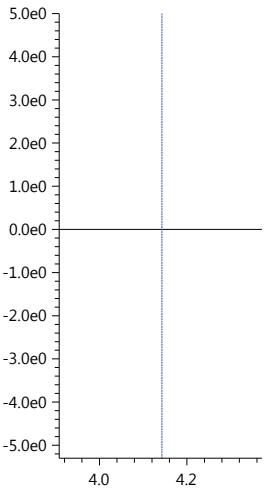
4_2-FTS-13C_IS
Conc ----
RT ---- Area ----

ISTD 328.80>309.05 (-) 0.00e0



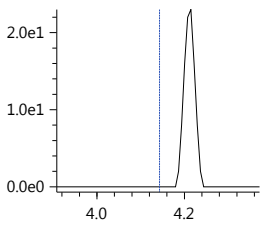
4_2-FTS-13C
Conc ----
RT ---- Area ----

Q 328.80>309.05 (-) 0.00e0

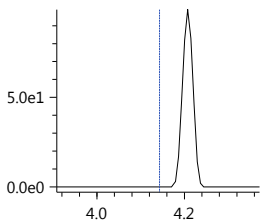


4_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 327.00>307.05 (-) 2.30e1

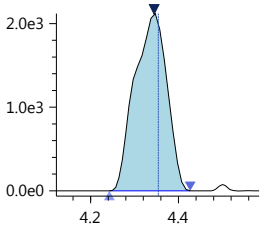


R1 327.00>81.10 (-) 9.90e1

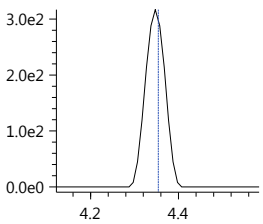


PFHpA
Conc 124.7085
RT 4.345 Area 10911
R#1 14.81 (0.00)

Q 362.90>319.00 (-) 2.12e3

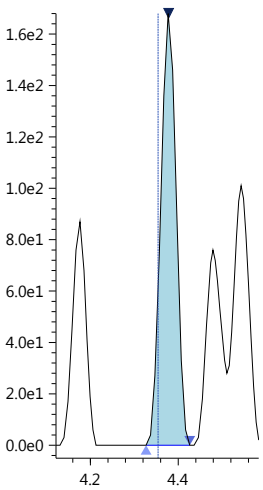


R1 362.90>169.00 (-) 3.17e2



PFHpA-13C_IS
Conc 5.0000
RT 4.378 Area 410

ISTD 366.90>322.10 (-) 1.68e2



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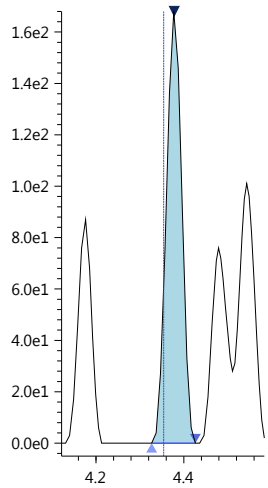
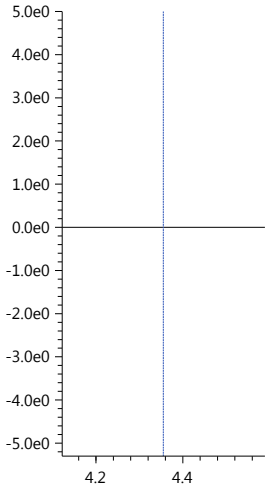
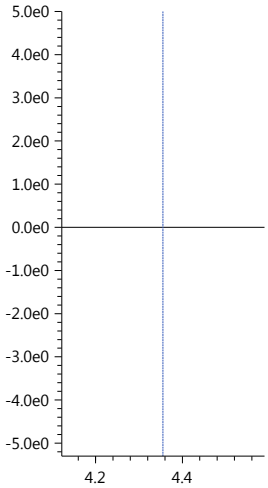
PFHpA-13C
Conc 1.9939
RT 4.378 Area 410
Q 366.90>322.10 (-) 1.68e2



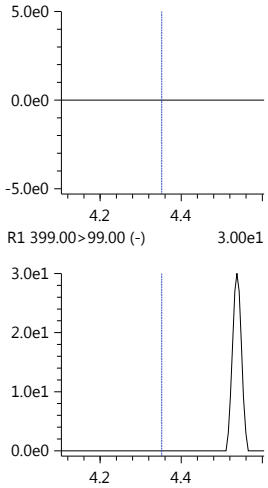
PFHxS-18O_IS
Conc ----
RT ---- Area ----
ISTD 402.70>84.05 (-) 0.00e0



PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 0.00e0

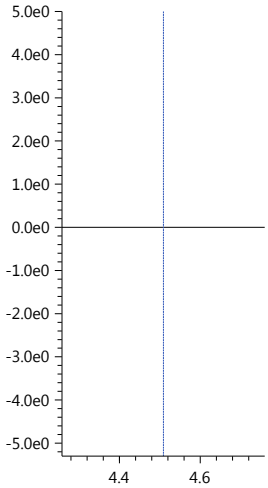


PFHxS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 399.00>80.00 (-) 0.00e0

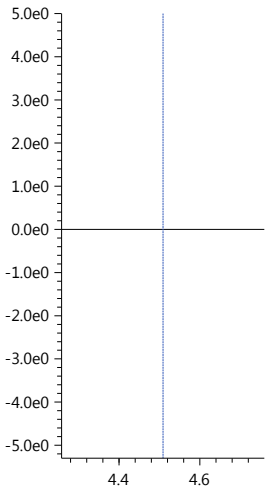


R1 399.00>99.00 (-) 3.00e1

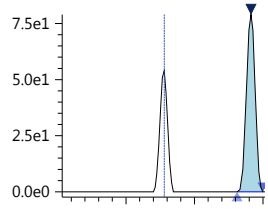
6_2-FTS-13C
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-) 0.00e0



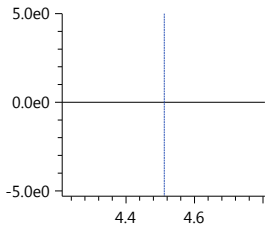
6_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-) 0.00e0



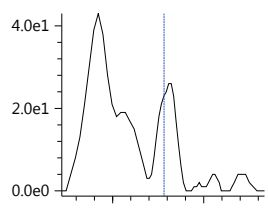
6_2-FTS_1
Conc 0.0000
RT 4.765 Area 142
R#1 0.00 (0.00)
Q 427.00>407.00 (-) 7.90e1



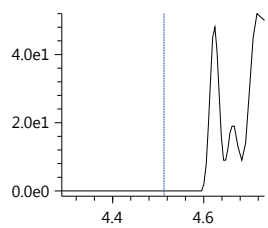
R1 427.00>80.90 (-) 0.00e0



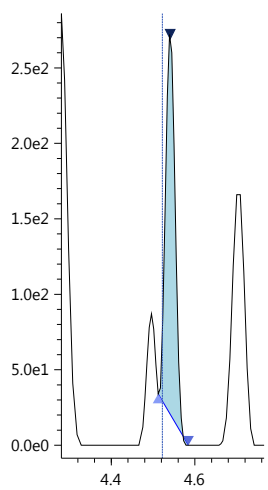
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 4.30e1



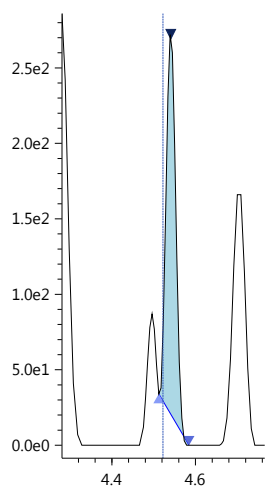
R1 449.00>99.20 (-) 5.20e1



PFOA-13C_IS
Conc 5.0000
RT 4.541 Area 401
ISTD 416.80>372.05 (-) 2.86e2



PFOA-13C
Conc 1.4622
RT 4.541 Area 401
Q 416.80>372.05 (-) 2.86e2



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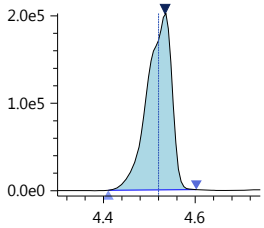
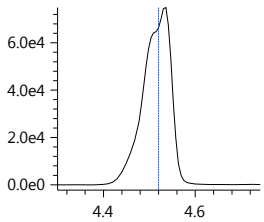
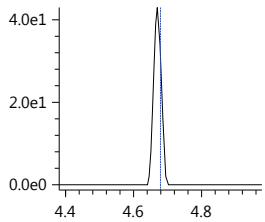
PFOA
Conc 11444.4336
RT 4.534 Area 751483
R#1 36.94 (0.00)
Q 413.00>369.00 (-) 2.03e5



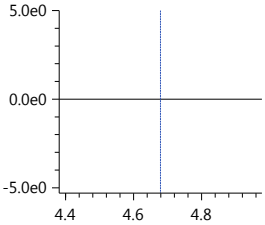
R1 413.00>169.10 (-) 7.49e4



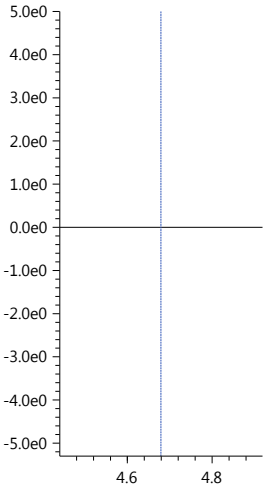
PFOS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 499.00>80.00 (-) 4.30e1



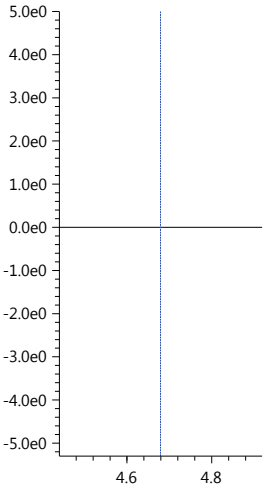
R1 499.00>99.00 (-) 0.00e0



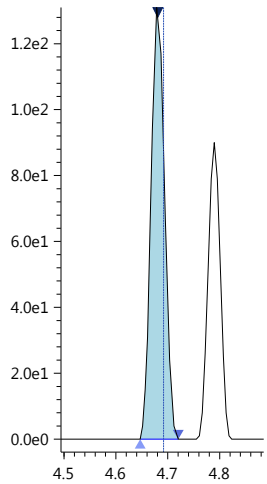
PFOS-13C_IS
Conc ----
RT ---- Area ----
ISTD 502.80>80.05 (-) 0.00e0



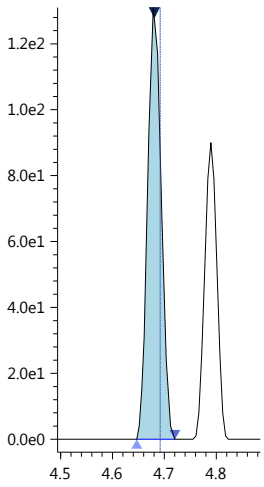
PFOS-13C
Conc ----
RT ---- Area ----
Q 502.80>80.05 (-) 0.00e0



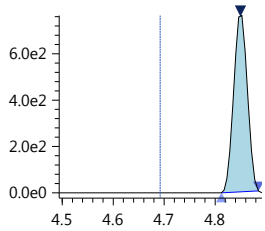
PFNA-13C_IS
Conc 5.0000
RT 4.681 Area 240
ISTD 467.80>423.00 (-) 1.31e2



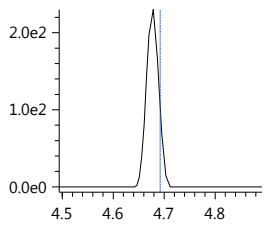
PFNA-13C
Conc 1.0525
RT 4.681 Area 240
Q 467.80>423.00 (-) 1.31e2



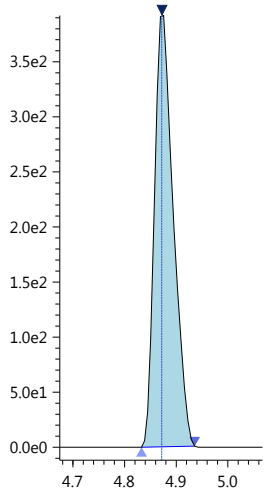
PFNA
Conc 45.2973
RT 4.850 Area 1448
R#1 0.00 (0.00)
Q 463.00>418.90 (-) 7.65e2



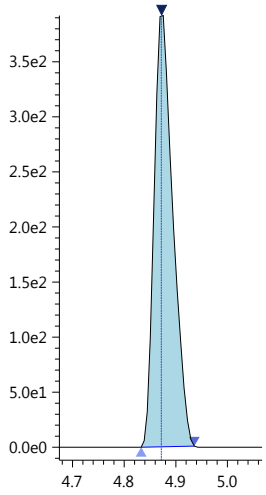
R1 463.00>219.00 (-) 2.30e2



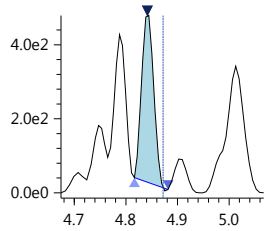
PFDA-13C_IS
Conc 5.0000
RT 4.873 Area 996
ISTD 514.80>469.95 (-) 3.92e2



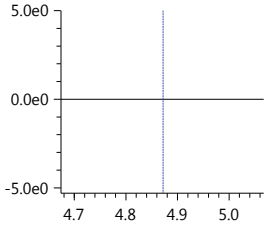
PFDA-13C
Conc 5.0083
RT 4.873 Area 996
Q 514.80>469.95 (-) 3.92e2



PFDA
Conc 4.4528
RT 4.842 Area 743
R#1 0.00 (0.00)
Q 513.00>468.80 (-) 4.79e2



R1 513.00>219.10 (-) 0.00e0



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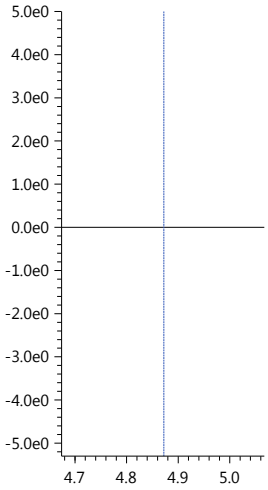
8_2-FTS-13C_IS

Conc ----
RT ---- Area ----

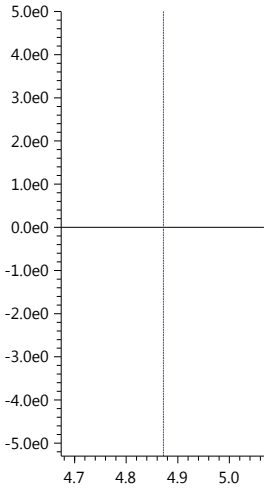
ISTD 528.80>509.00 (-) 0.00e0



8_2-FTS-13C

Conc ----
RT ---- Area ----

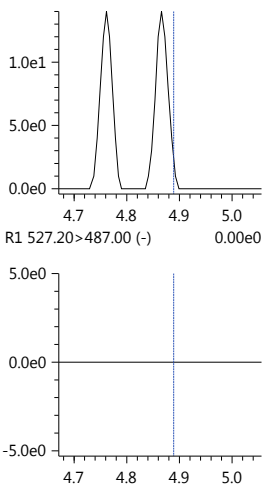
Q 528.80>509.00 (-) 0.00e0



8_2-FTS_1

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

Q 527.10>506.90 (-) 1.40e1

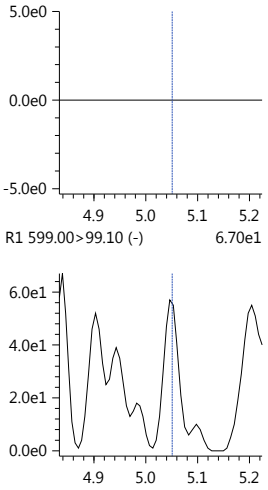


R1 527.20>487.00 (-) 0.00e0

PFDS_1

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

Q 599.00>79.90 (-) 0.00e0

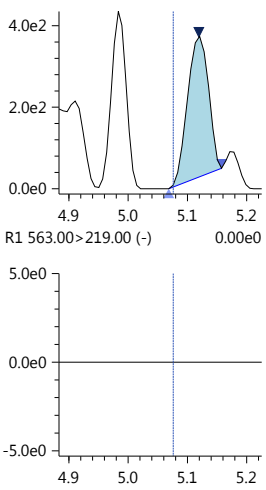


R1 599.00>99.10 (-) 6.70e1

PFUnA

Conc 4.3041
RT 5.119 Area 853
R#1 0.00 (0.00)

Q 563.00>518.90 (-) 4.35e2

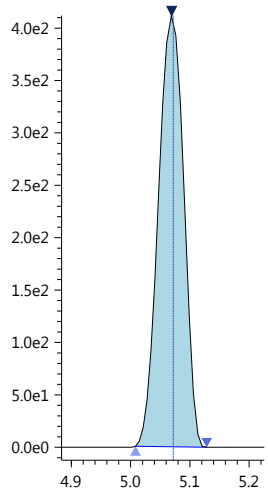


R1 563.00>219.00 (-) 0.00e0

PFUnA-13C_IS

Conc 5.0000
RT 5.069 Area 1226

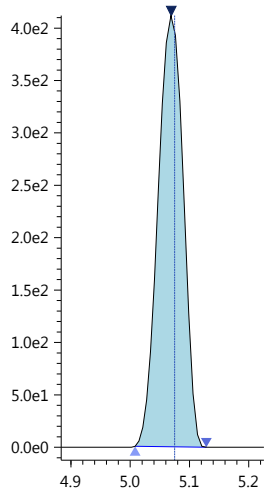
ISTD 564.80>519.95 (-) 4.12e2



PFUnA-13C

Conc 6.5869
RT 5.069 Area 1226

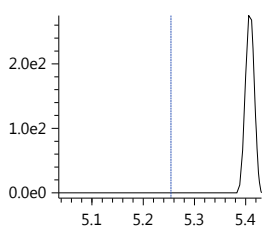
Q 564.80>519.95 (-) 4.12e2



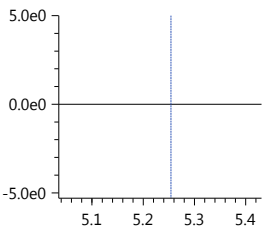
PFDoA

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

Q 613.05>569.00 (-) 2.75e2



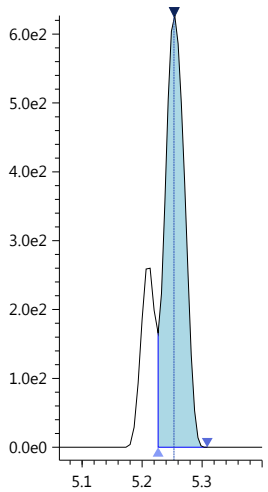
R1 613.05>169.00 (-) 0.00e0



PFDoA-13C

Conc 5.2943
RT 5.254 Area 1430

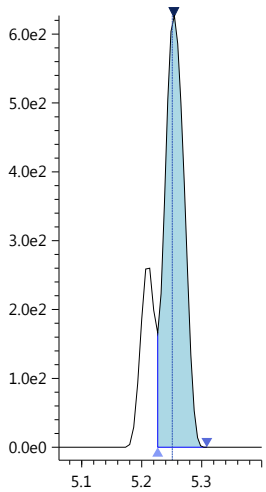
Q 614.80>569.95 (-) 6.27e2



PFDoA-13C_IS

Conc 5.0000
RT 5.254 Area 1430

ISTD 614.80>569.95 (-) 6.27e2



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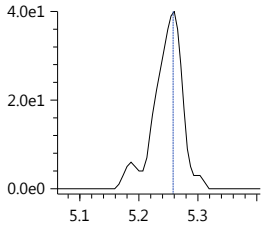
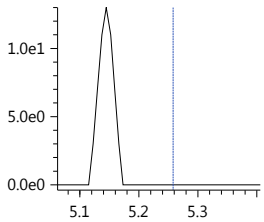
10_2-FtS_1

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

Q 627.00>606.95 (-) 4.00e1



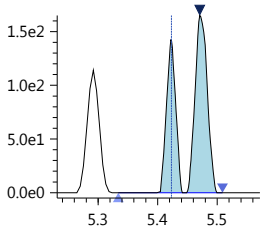
R1 627.00>81.25 (-) 1.30e1



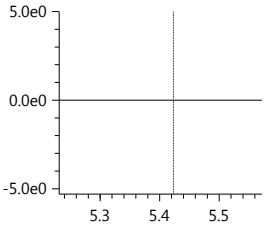
PFTrDA

Conc 0.7565
RT 5.471 Area 392
R#1 0.00 (0.00)

Q 663.00>618.90 (-) 1.65e2



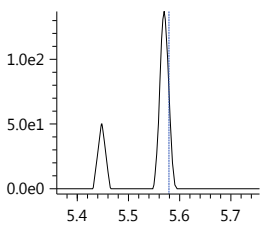
R1 662.90>169.00 (-) 0.00e0



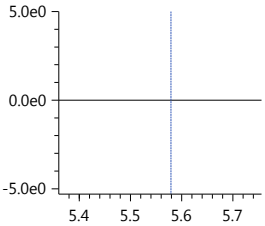
PFTeDA

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

Q 713.40>669.00 (-) 1.37e2



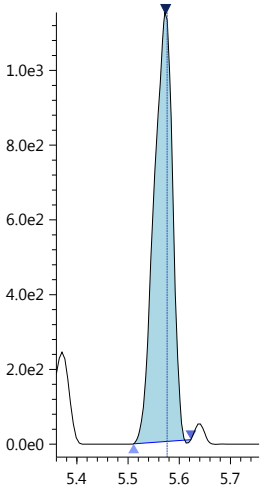
R1 713.40>169.10 (-) 0.00e0



PFTeDA-13C

Conc 14.9298
RT 5.573 Area 2886

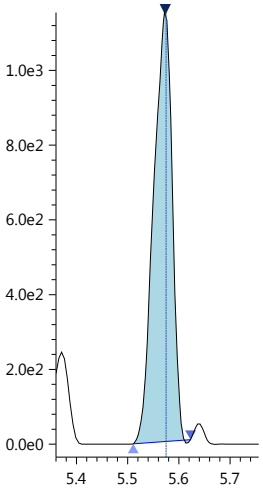
Q 714.70>669.90 (-) 1.16e3



PFTeDA-13C_IS

Conc 5.0000
RT 5.573 Area 2886

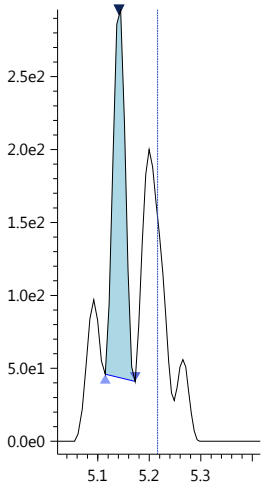
ISTD 714.70>669.90 (-) 1.16e3



FOSA-13C_IS

Conc 5.0000
RT 5.141 Area 421

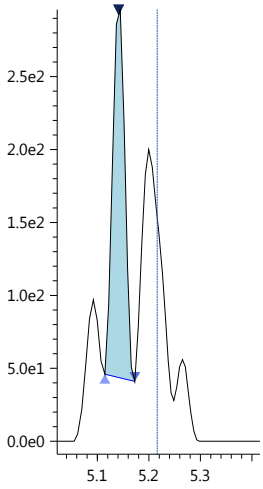
ISTD 506.00>78.05 (-) 2.96e2



FOSA-13C

Conc 4.7857
RT 5.141 Area 421

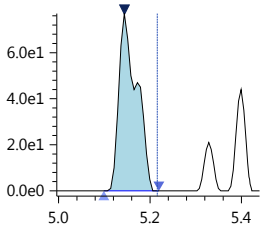
Q 506.00>78.05 (-) 2.96e2



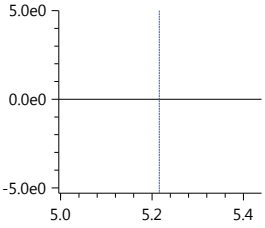
FOSA

Conc 1.8682
RT 5.144 Area 210
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 7.70e1



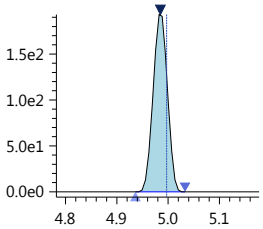
R1 498.20>64.10 (-) 0.00e0



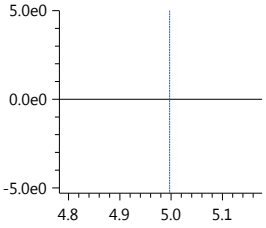
N-MeFOSAA

Conc 0.9804
RT 4.985 Area 378
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 1.93e2



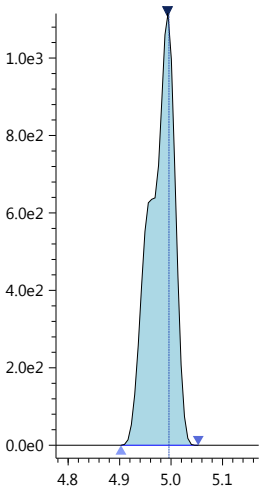
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 105.6418
RT 4.993 Area 3678

Q 572.80>419.05 (-) 1.12e3



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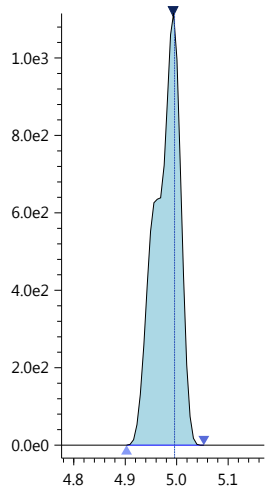
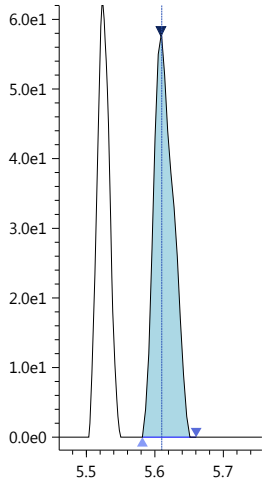
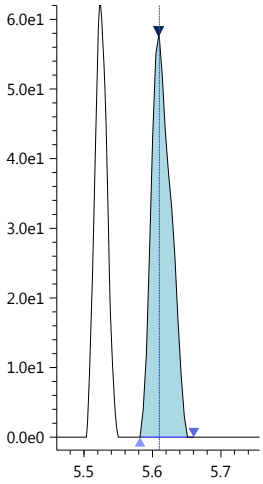
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.993 Area 3678
ISTD 572.80>419.05 (-) 1.12e3



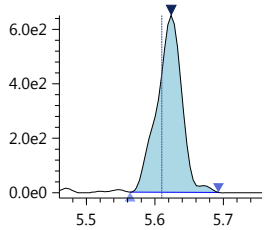
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.609 Area 117
ISTD 514.90>168.90 (-) 6.20e1



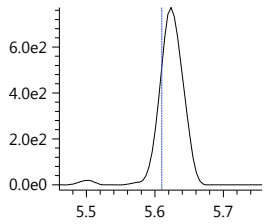
N-MeFOSA-d3
Conc 4.6591
RT 5.609 Area 117
Q 514.90>168.90 (-) 6.20e1



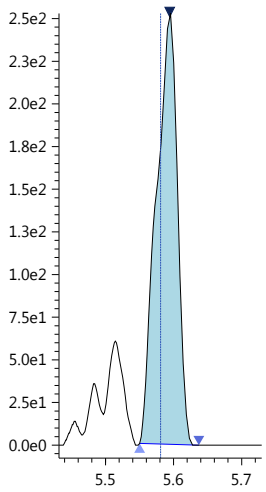
N-MeFOSA
Conc 52.9058
RT 5.624 Area 1629
R#1 119.10 (0.00)
Q 512.00>169.10 (-) 6.51e2



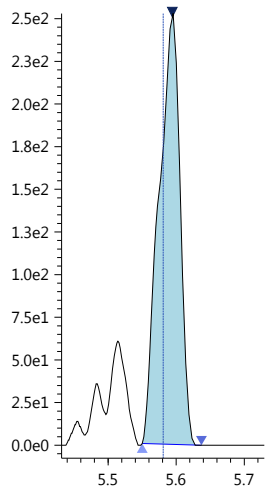
R1 512.00>219.00 (-) 7.72e2



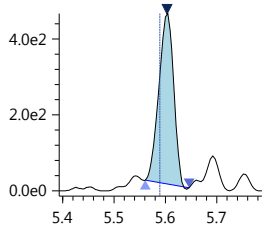
N-MeFOSE-d7
Conc 14.9148
RT 5.594 Area 542
Q 622.70>59.10 (-) 2.53e2



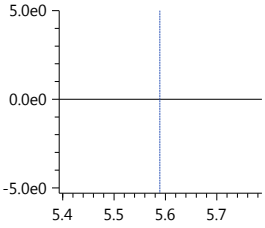
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.594 Area 542
ISTD 622.70>59.10 (-) 2.53e2



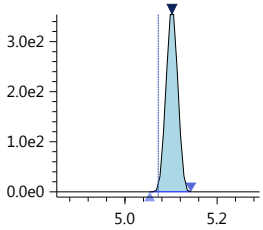
N-MeFOSE
Conc 5.7135
RT 5.603 Area 900
R#1 0.00 (0.00)
Q 616.00>59.00 (-) 4.67e2



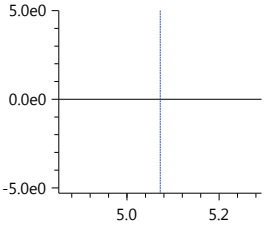
R1 556.00>121.20 (-) 0.00e0



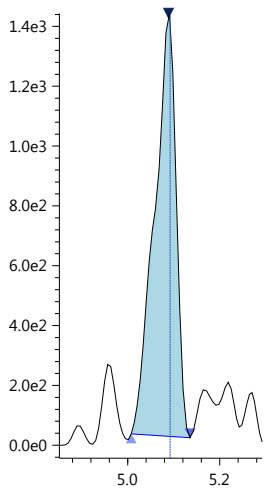
N-EtFOSAA
Conc 1.6059
RT 5.102 Area 669
R#1 0.00 (0.00)
Q 584.20>418.95 (-) 3.54e2



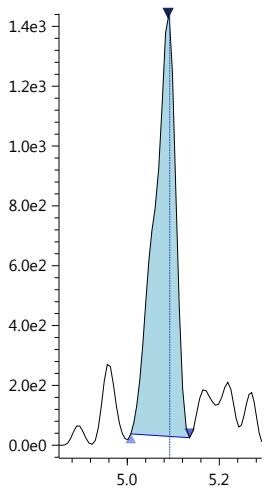
R1 584.20>526.10 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.089 Area 4600
ISTD 588.80>419.00 (-) 1.44e3



N-EtFOSAA-d5
Conc 137.6352
RT 5.089 Area 4600
Q 588.80>419.00 (-) 1.44e3



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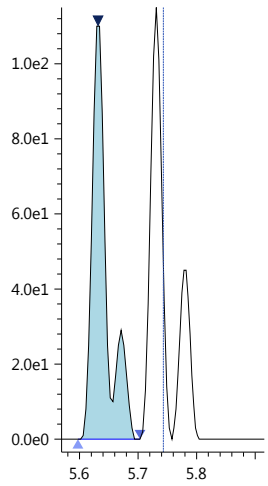
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.632 Area 195

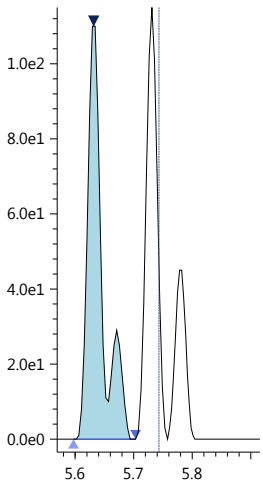
ISTD 530.90>169.15 (-) 1.15e2



N-EtFOSA-d9

Conc 4.6530
RT 5.632 Area 195

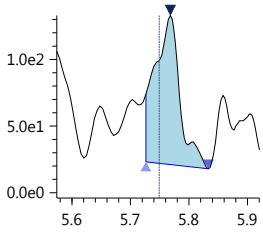
Q 530.90>169.15 (-) 1.15e2



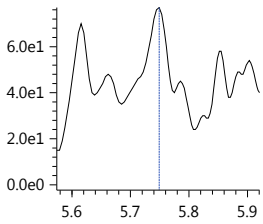
N-EtFOSA

Conc 47.8482
RT 5.768 Area 331
R#1 0.96 (0.00)

Q 526.90>169.10 (-) 1.33e2



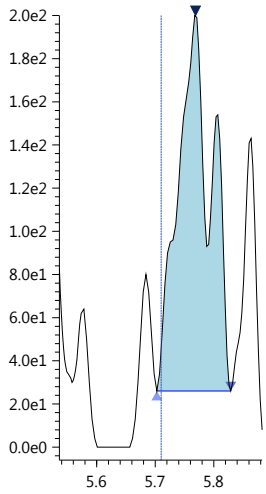
R1 526.90>219.00 (-) 7.70e1



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.769 Area 687

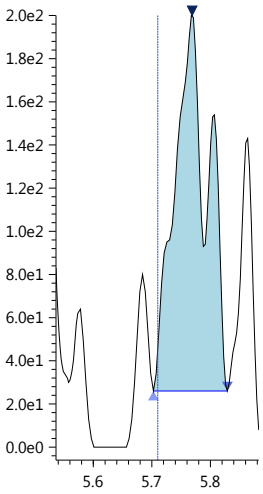
ISTD 638.70>59.10 (-) 2.00e2



N-EtFOSE-d9

Conc 17.5014
RT 5.769 Area 687

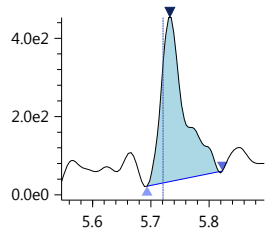
Q 638.70>59.10 (-) 2.00e2



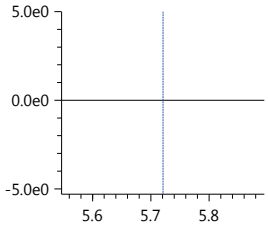
N-EtFOSE

Conc 7.0749
RT 5.733 Area 1182
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 4.53e2



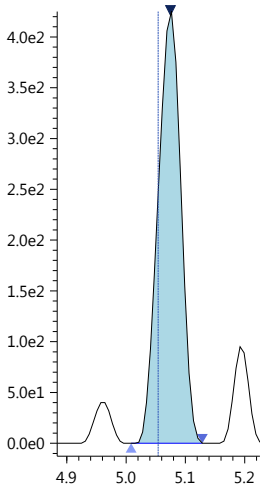
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.075 Area 1147

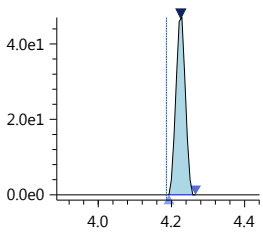
ISTD 570.00>525.00 (-) 4.25e2



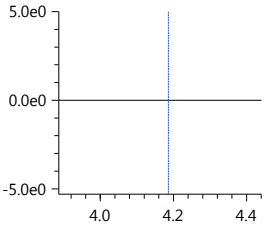
PFPeS

Conc 0.0000
RT 4.225 Area 85
R#1 0.00 (0.00)

Q 349.00>99.00 (-) 4.70e1



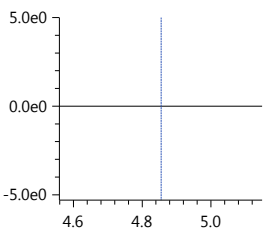
R1 349.00>79.95 (-) 0.00e0



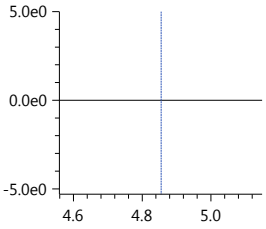
PFNS

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

Q 549.00>99.00 (-) 0.00e0



R1 549.00>79.95 (-) 0.00e0



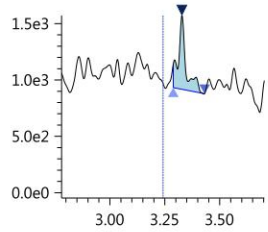
Insight Report

Printed at 1/7/2019 10:13:37 AM

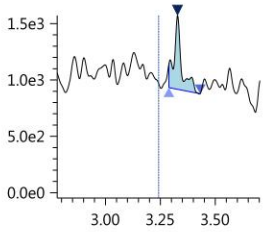
010419_026

Sample ID: T-PFOA
Date acquired: 1/4/2019 6:50:46 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190104curve\010419_026.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

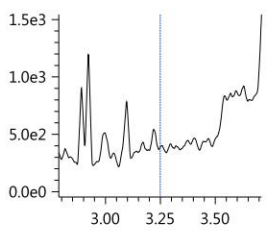
PFBA-13C_IS
Conc 5.0000
RT 3.328 Area 1575
ISTD 216.90>172.15 (-) 1.57e3



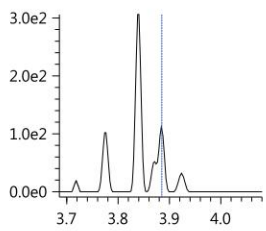
PFBA-13C
Conc 10.6971
RT 3.328 Area 1575
Q 216.90>172.15 (-) 1.57e3



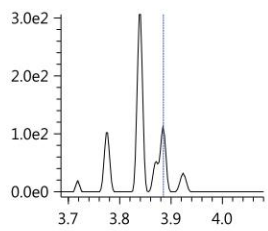
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.54e3



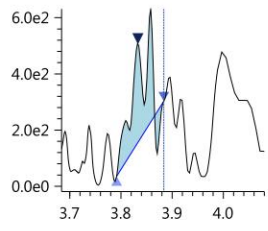
PFPeA-13C_IS
Conc ----
RT ---- Area ----
ISTD 267.90>223.00 (-) 3.06e2



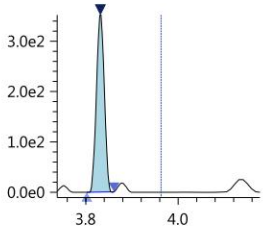
PFPeA-13C
Conc ----
RT ---- Area ----
Q 267.90>223.00 (-) 3.06e2



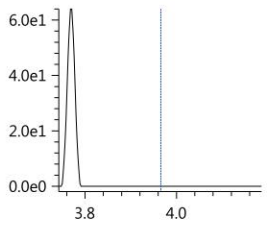
PFPeA
Conc 0.0000
RT 3.833 Area 763
Q 263.05>219.10 (-) 6.31e2



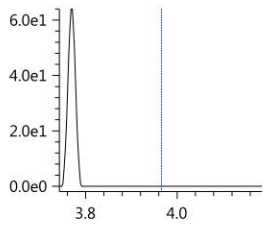
PFBS_1
Conc 0.0000
RT 3.832 Area 420
Q 299.00>80.00 (-) 3.52e2



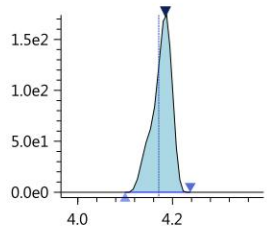
PFBS-13C
Conc ----
RT ---- Area ----
Q 301.80>80.00 (-) 6.40e1



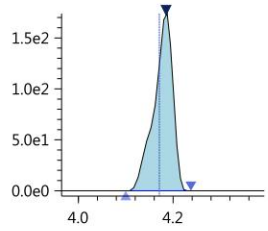
PFBS-13C_IS
Conc ----
RT ---- Area ----
ISTD 301.80>80.00 (-) 6.40e1



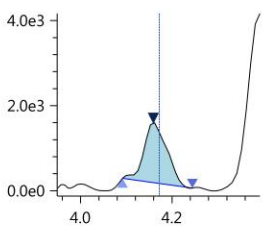
PFHxA-13C_IS
Conc 5.0000
RT 4.185 Area 475
ISTD 314.90>270.10 (-) 1.74e2



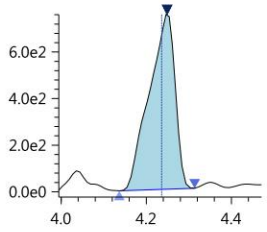
PFHxA-13C
Conc 1.7352
RT 4.185 Area 475
Q 314.90>270.10 (-) 1.74e2



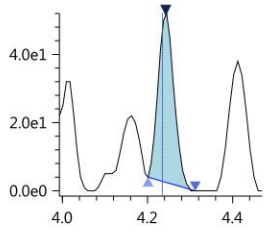
PFHxA
Conc 57.5947
RT 4.159 Area 4875
Q 313.00>269.00 (-) 4.17e3



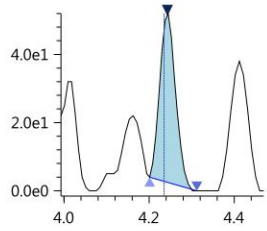
HPFO_DA
Conc 133.8302
RT 4.249 Area 3178
Q 329.00>169.00 (-) 7.61e2



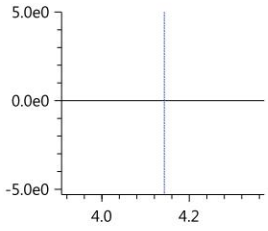
HFPO_DA-13C_IS
Conc 5.0000
RT 4.243 Area 128
ISTD 332.00>286.80 (-) 5.20e1



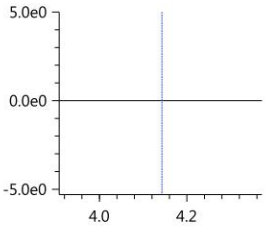
HFPO_DA-13C
Conc 2.6249
RT 4.243 Area 128
Q 332.00>286.80 (-) 5.20e1



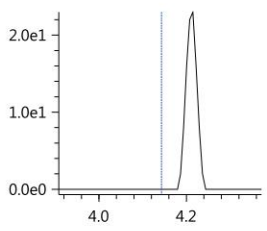
4_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 328.80>309.05 (-) 0.00e0



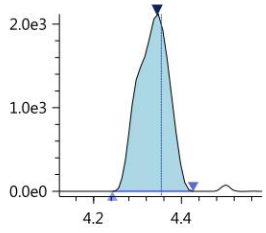
4_2-FTS-13C
Conc ----
RT ---- Area ----
Q 328.80>309.05 (-) 0.00e0



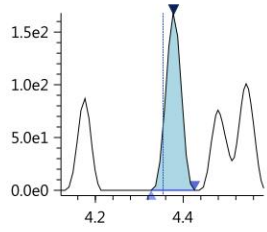
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 2.30e1



PFHpA
Conc 124.2389
RT 4.345 Area 10911
Q 362.90>319.00 (-) 2.12e3



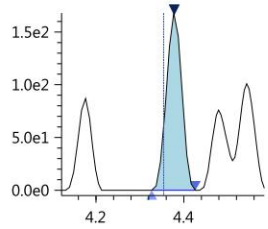
PFHpA-13C_IS
Conc 5.0000
RT 4.378 Area 410
ISTD 366.90>322.10 (-) 1.68e2



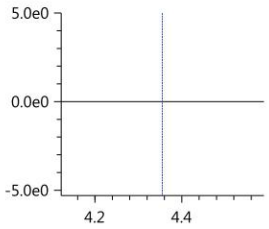
Insight Report

Printed at 1/7/2019 10:13:37 AM

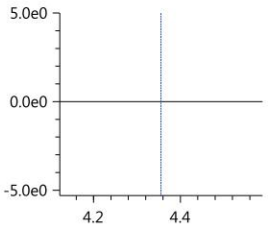
PFHpA-13C
Conc 1.9939
RT 4.378 Area 410
Q 366.90>322.10 (-) 1.68e2



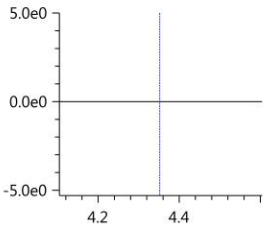
PFHxS-18O_IS
Conc ----
RT ---- Area ----
ISTD 402.70>84.05 (-) 0.00e0



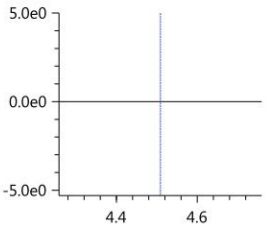
PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 0.00e0



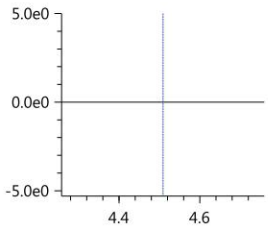
PFHxS_1
Conc ----
RT ---- Area ----
Q 399.00>80.00 (-) 0.00e0



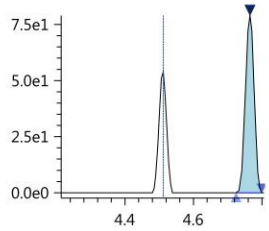
6_2-FTS-13C
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-) 0.00e0



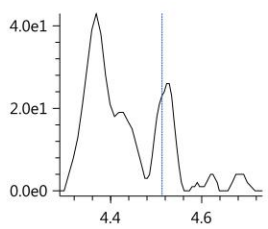
6_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-) 0.00e0



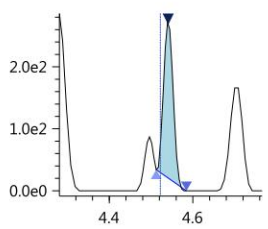
6_2-FTS_1
Conc 0.0000
RT 4.765 Area 142
Q 427.00>407.00 (-) 7.90e1



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 4.30e1



PFOA-13C_IS
Conc 5.0000
RT 4.541 Area 401
ISTD 416.80>372.05 (-) 2.86e2



PFOA-13C
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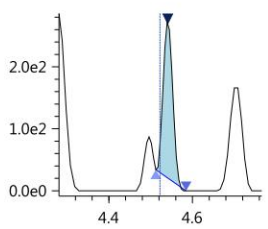
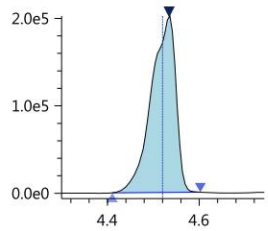
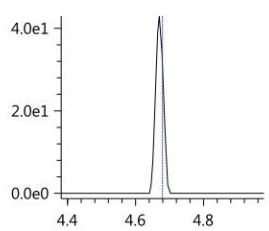


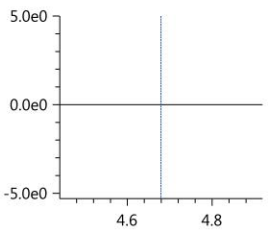
PFOA
Conc 11370.5828
RT 4.534 Area 751483
Q 413.00>369.00 (-) 2.03e5



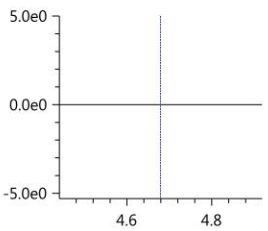
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 4.30e1



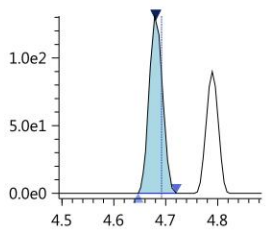
PFOS-13C_IS
Conc ----
RT ---- Area ----
ISTD 502.80>80.05 (-) 0.00e0



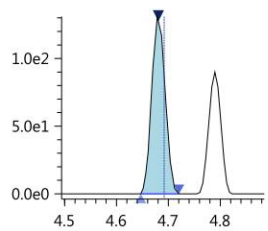
PFOS-13C
Conc ----
RT ---- Area ----
Q 502.80>80.05 (-) 0.00e0



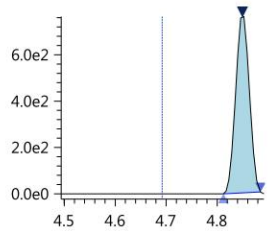
PFNA-13C_IS
Conc 5.0000
RT 4.681 Area 240
ISTD 467.80>423.00 (-) 1.31e2



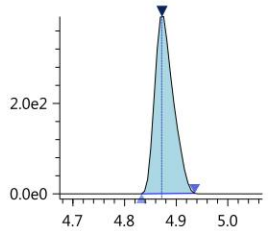
PFNA-13C
Conc 1.0525
RT 4.681 Area 240
Q 467.80>423.00 (-) 1.31e2



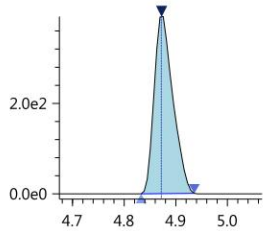
PFNA
Conc 45.9545
RT 4.850 Area 1448
Q 463.00>418.90 (-) 7.65e2



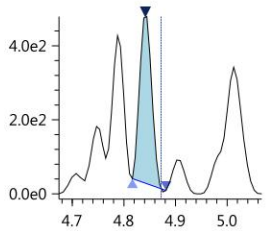
PFDA-13C_IS
Conc 5.0000
RT 4.873 Area 996
ISTD 514.80>469.95 (-) 3.92e2



PFDA-13C
Conc 5.0083
RT 4.873 Area 996
Q 514.80>469.95 (-) 3.92e2



PFDA
Conc 4.4528
RT 4.842 Area 743
Q 513.00>468.80 (-) 4.79e2



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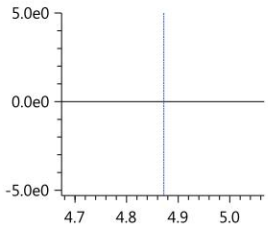
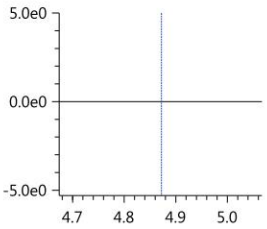
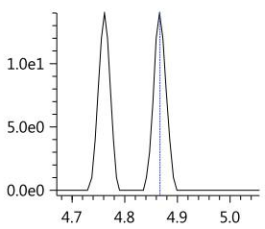
8_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 528.80>509.00 (-) 0.00e0



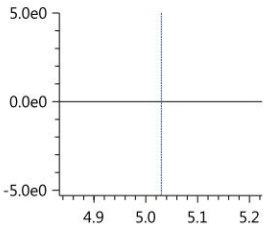
8_2-FTS-13C
Conc ----
RT ---- Area ----
Q 528.80>509.00 (-) 0.00e0



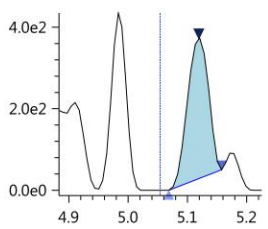
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.40e1



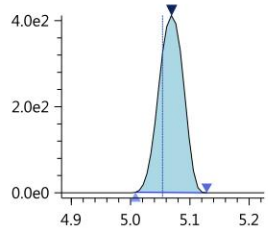
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



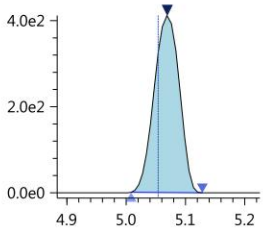
PFUnA
Conc 4.2876
RT 5.119 Area 853
Q 563.00>518.90 (-) 4.35e2



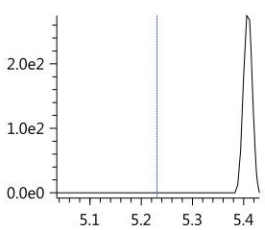
PFUnA-13C_IS
Conc 5.0000
RT 5.069 Area 1226
ISTD 564.80>519.95 (-) 4.12e2



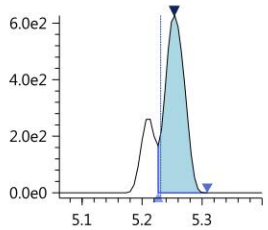
PFUnA-13C
Conc 6.5869
RT 5.069 Area 1226
Q 564.80>519.95 (-) 4.12e2



PFDoA
Conc ----
RT ---- Area ----
Q 613.05>569.00 (-) 2.75e2



PFDoA-13C
Conc 5.2943
RT 5.254 Area 1430
Q 614.80>569.95 (-) 6.27e2



PFDoA-13C_IS
Conc 5.0000
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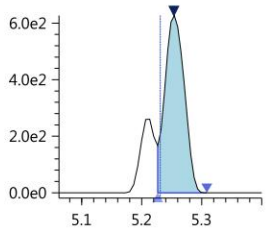
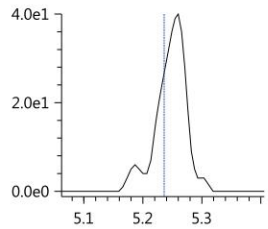
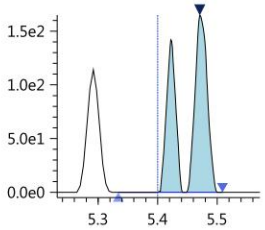
ISTD 614.80>569.95 (-) 6.27e2



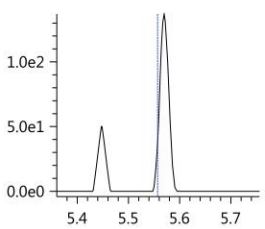
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 4.00e1



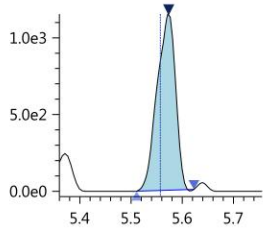
PFTrDA
Conc 0.7502
RT 5.471 Area 392
Q 663.00>618.90 (-) 1.65e2



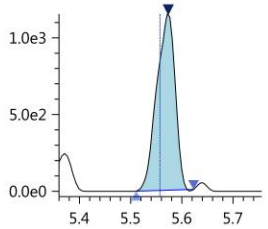
PFTeDA
Conc ----
RT ---- Area ----
Q 713.40>669.00 (-) 1.37e2



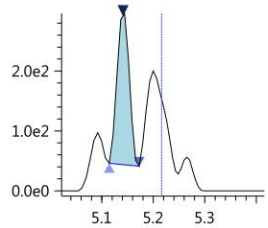
PFTeDA-13C
Conc 14.9298
RT 5.573 Area 2886
Q 714.70>669.90 (-) 1.16e3



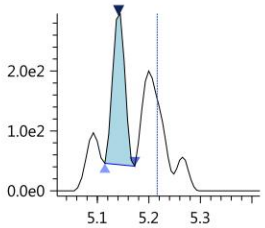
PFTeDA-13C_IS
Conc 5.0000
RT 5.573 Area 2886
ISTD 714.70>669.90 (-) 1.16e3



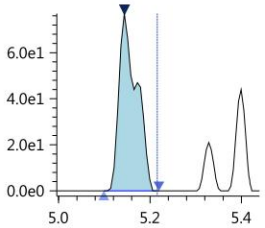
FOSA-13C_IS
Conc 5.0000
RT 5.141 Area 421
ISTD 506.00>78.05 (-) 2.96e2



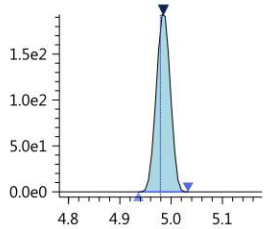
FOSA-13C
Conc 4.7857
RT 5.141 Area 421
Q 506.00>78.05 (-) 2.96e2



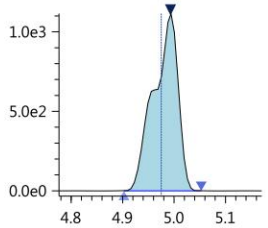
FOSA
Conc 1.8682
RT 5.144 Area 210
Q 498.20>78.00 (-) 7.70e1



N-MeFOSAA
Conc 1.1222
RT 4.985 Area 378
Q 570.20>419.00 (-) 1.93e2



N-MeFOSAA-d3
Conc 105.6418
RT 4.993 Area 3678
Q 572.80>419.05 (-) 1.12e3



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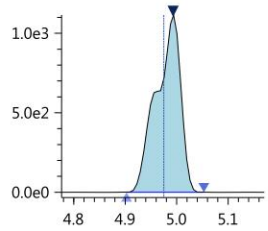
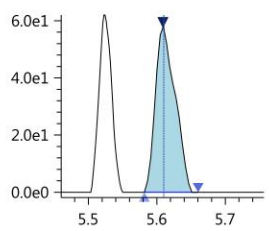
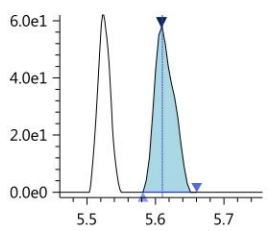
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.993 Area 3678
ISTD 572.80>419.05 (-) 1.12e3



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.609 Area 117
ISTD 514.90>168.90 (-) 6.20e1



N-MeFOSA-d3
Conc 4.6591
RT 5.609 Area 117
Q 514.90>168.90 (-) 6.20e1



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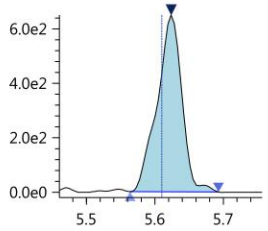
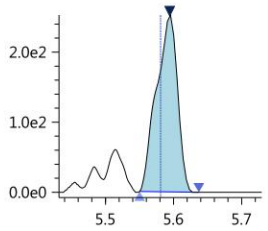
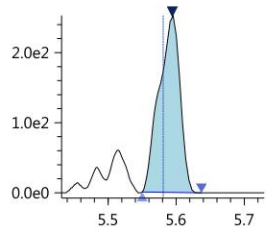
Conc 52.9058
RT 5.624 Area 1629
Q 512.00>169.10 (-) 6.51e2



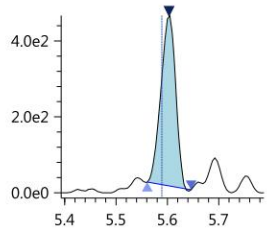
N-MeFOSE-d7
Conc 14.9148
RT 5.594 Area 542
Q 622.70>59.10 (-) 2.53e2



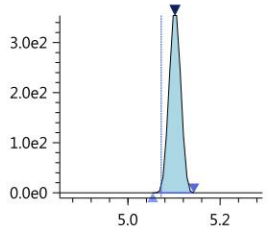
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.594 Area 542
ISTD 622.70>59.10 (-) 2.53e2



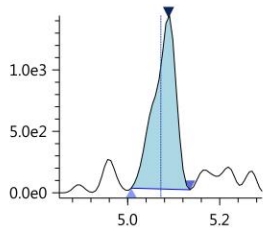
N-MeFOSE
Conc 5.7135
RT 5.603 Area 900
Q 616.00>59.00 (-) 4.67e2



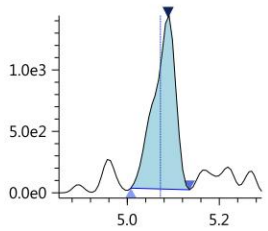
N-EtFOSAA
Conc 1.9701
RT 5.102 Area 669
Q 584.20>418.95 (-) 3.54e2



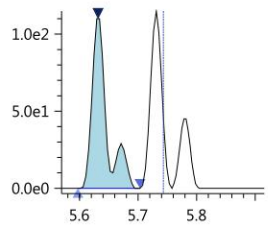
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.089 Area 4600
ISTD 588.80>419.00 (-) 1.44e3



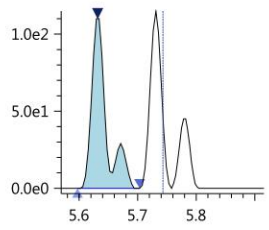
N-EtFOSAA-d5
Conc 137.6352
RT 5.089 Area 4600
Q 588.80>419.00 (-) 1.44e3



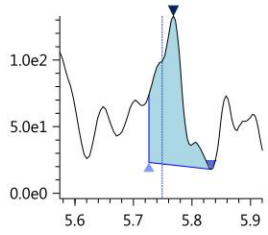
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.632 Area 195
ISTD 530.90>169.15 (-) 1.15e2



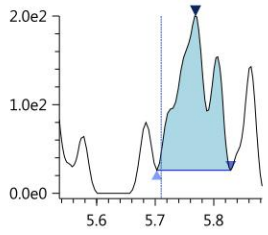
N-EtFOSA-d9
Conc 4.6530
RT 5.632 Area 195
Q 530.90>169.15 (-) 1.15e2



N-EtFOSA
Conc 49.2361
RT 5.768 Area 331
Q 526.90>169.10 (-) 1.33e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.769 Area 687
ISTD 638.70>59.10 (-) 2.00e2



N-EtFOSE-d9
Conc 17.5014
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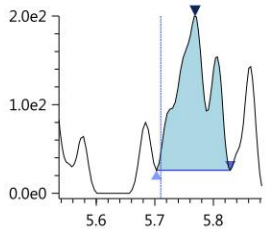
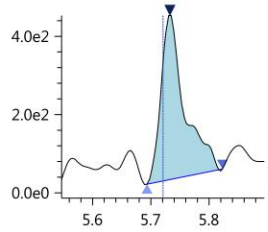
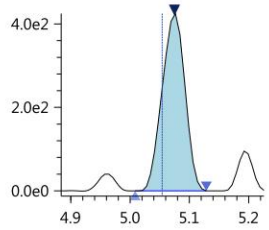
Q 638.70>59.10 (-) 2.00e2



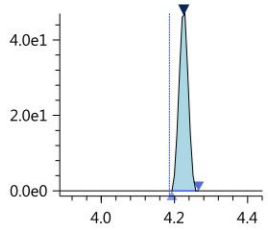
N-EtFOSE
Conc 7.0749
RT 5.733 Area 1182
Q 630.00>58.90 (-) 4.53e2



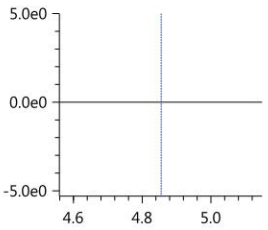
13C7-PFUnDA_IS
Conc 5.0000
RT 5.075 Area 1147
ISTD 570.00>525.00 (-) 4.25e2



PFPeS
Conc 0.0000
RT 4.225 Area 85
Q 349.00>99.00 (-) 4.70e1



PFNS
Conc ----
RT ---- Area ----
Q 549.00>99.00 (-) 0.00e0



190118_b1

ICAL Date: 1/18/2019
Cal. Std. xp: 3/12/2019
ICAL ID: KC1900021
LIMS ID: 622537

1st Review: Chris Muller
2nd Review: JAN 2 3 2019
Column: LCMS06 -Shimadzu 8050
Phenomenex EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 18-OLC-02-68B **B:** 5mM Ammonium Acetate In MeOH 18-OLC-02-68C

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	IB	18-OLC-02-70C	190118_022	PFAS_121918_CM.lcm	1x	☒	
2	0.05 PPB ICAL	18-OLC-02-56F	190118_023	PFAS_121918_CM.lcm	1x	☒	
3	0.10 PPB ICAL	18-OLC-02-56G	190118_024	PFAS_121918_CM.lcm	1x	☒	
4	0.50 PPB ICAL	18-OLC-02-56H	190118_025	PFAS_121918_CM.lcm	1x	☒	
5	1.0 PPB ICAL	18-OLC-02-56I	190118_026	PFAS_121918_CM.lcm	1x	☒	
6	5.0 PPB ICAL	18-OLC-02-56J	190118_027	PFAS_121918_CM.lcm	1x	☒	
7	10.0 PPB ICAL	18-OLC-02-56K	190118_028	PFAS_121918_CM.lcm	1x	☒	
8	15.0 PPB ICAL	18-OLC-02-56L	190118_029	PFAS_121918_CM.lcm	1x	☒	
9	IB	18-OLC-02-70C	190118_030	PFAS_121918_CM.lcm	1x	☒	
10	1.0 PPB ICV	18-OLC-02-56M	190118_031	PFAS_121918_CM.lcm	1x	☒	
11	IB	18-OLC-02-70C	190118_032	PFAS_121918_CM.lcm	1x	☒	
12	T-PFOA	18-OLC-02-43M	190118_033	PFAS_121918_CM.lcm	1x	☒	
13	KQ1900727-04	MB	190118_034	PFAS_121918_CM.lcm	1x	☒	
14	KQ1900727-03	LCS	190118_035	PFAS_121918_CM.lcm	1x	☒	
15	K1900511-004		190118_036	PFAS_121918_CM.lcm	1x	☒	
16	KQ1900727-01	K1900511-004 MS	190118_037	PFAS_121918_CM.lcm	1x	☒	
17	KQ1900727-02	K1900511-004 DMS	190118_038	PFAS_121918_CM.lcm	1x	☒	
18	K1900511-005		190118_039	PFAS_121918_CM.lcm	1x	☒	High HpA surr, ND
19	K1900511-006		190118_040	PFAS_121918_CM.lcm	1x	☒	
20	K1900511-007		190118_041	PFAS_121918_CM.lcm	1x	☒	High DoDA, EtFOSAA surrr, ND
21	K1900511-008		190118_042	PFAS_121918_CM.lcm	1x	☒	
22	KQ1900648-03	MB	190118_043	PFAS_121918_CM.lcm	1x	☒	
23	KQ1900648-01	LCS	190118_044	PFAS_121918_CM.lcm	1x	☒	
24	KQ1900648-02	DLCS	190118_045	PFAS_121918_CM.lcm	1x	☒	
25	K1900393-001		190118_046	PFAS_121918_CM.lcm	1x	☒	
26	K1900394-001		190118_047	PFAS_121918_CM.lcm	1x	☒	
27	K1900511-002		190118_048	PFAS_121918_CM.lcm	1x	☒	
28	K1900511-003		190118_049	PFAS_121918_CM.lcm	1x	☒	
29	KQ1900712-03	MB	190118_050	PFAS_121918_CM.lcm	1x	☒	
30	KQ1900712-01	LCS	190118_051	PFAS_121918_CM.lcm	1x	☒	
31	KQ1900712-02	DLCS	190118_052	PFAS_121918_CM.lcm	1x	☒	
32	K1900511-001		190118_053	PFAS_121918_CM.lcm	1x	☒	

Insight Report

Printed at 1/21/2019 10:49:39 AM

Batch File: ----
Method File: J:\LCMS06\Data\190118_b1\190118_b1.lcm
Project File: J:\LCMS06\Data\190118_b1\190118_b1.damlp
Flags File: J:\LCMS06\Data\190118_b1\190118_b1.damlp

190118_022

Sample ID: IB
Date acquired: 1/18/2019 5:36:54 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_022.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

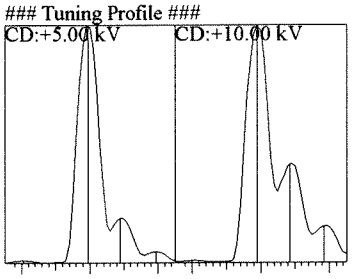
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.323	2712852	2712852	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.323	2712852	5018733	26	5.0078	ng/mL	----
PFBA	ND(W/B)	----	----	2712852	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.917	1653265	1653265	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.917	1653265	5018733	26	5.0123	ng/mL	----
PFPeA	Auto	3.917	80099	1653265	4	0.0062	ng/mL	----
PFBS_1	M	3.976	135	988190	16	0.0007	ng/mL	----
PFBS-13C	Auto	3.972	988190	5018733	26	5.0092	ng/mL	----
PFBS-13C_IS	Auto	3.972	988190	988190	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.181	5943791	5943791	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.181	5943791	5018733	26	5.2963	ng/mL	----
PFHxA	M	4.175	8699	5943791	6	0.0097	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1071264	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.246	1071264	1071264	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.246	1071264	5018733	26	5.0870	ng/mL	----
4_2-FTS-13C_IS	Auto	4.153	543161	543161	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.153	543161	5018733	26	4.8302	ng/mL	----
4_2-FTS_1	Auto	4.156	207	543161	5	0.0020	ng/mL	----
PFHpA	M	4.349	4637	4249284	8	0.0147	ng/mL	----
PFHpA-13C_IS	Auto	4.361	4249284	4249284	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.361	4249284	5018733	26	4.6092	ng/mL	----
PFHxS-18O_IS	Auto	4.360	557872	557872	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.360	557872	5018733	26	4.9956	ng/mL	----
PFHxS_1	Auto	4.357	2035	557872	7	0.0184	ng/mL	----
6_2-FTS-13C	Auto	4.523	433486	5018733	26	5.4797	ng/mL	----
6_2-FTS-13C_IS	Auto	4.523	433486	433486	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.521	366	433486	10	0.0043	ng/mL	----
PFHpS_1	M	4.523	194	557872	7	0.0015	ng/mL	----
PFOA-13C_IS	Auto	4.533	5348460	5348460	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.533	5348460	5018733	26	5.0920	ng/mL	----
PFOA	Auto	4.532	11852	5348460	9	0.0089	ng/mL	----
PFOS_1	Auto	4.674	326	661357	13	0.0034	ng/mL	----
PFOS-13C_IS	Auto	4.690	661357	661357	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.690	661357	5018733	26	5.2527	ng/mL	----
PFNA-13C_IS	Auto	4.703	4422128	4422128	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.703	4422128	5018733	26	4.8813	ng/mL	----
PFNA	Auto	4.684	444	4422128	11	0.0058	ng/mL	----
PFDA-13C_IS	Auto	4.887	4391079	4391079	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.887	4391079	5018733	26	5.2315	ng/mL	----
PFDA	M	4.886	1862	4391079	12	0.0025	ng/mL	----
8_2-FTS-13C_IS	Auto	4.885	334975	334975	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.885	334975	5018733	26	5.3710	ng/mL	----
8_2-FTS_1	M	4.874	77	334975	15	0.0015	ng/mL	----
PFDS_1	ND(W/B)	----	----	661357	13	----	ng/mL	----
PFUnA	Auto	5.070	7888	4249132	14	0.0062	ng/mL	----
PFUnA-13C_IS	Auto	5.071	4249132	4249132	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.071	4249132	5018733	26	5.2048	ng/mL	----
PFDoA	Auto	5.258	1015	5885748	17	0.0043	ng/mL	----
PFDoA-13C	Auto	5.249	5885748	5018733	26	5.2745	ng/mL	----
PFDoA-13C_IS	Auto	5.249	5885748	5885748	17	5.0000	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	334975	15	----	ng/mL	----
PFTrDA	Auto	5.422	707	4584017	22	0.0043	ng/mL	----
PFTeDA	Auto	5.570	36962	4584017	22	0.0242	ng/mL	----
PFTeDA-13C	Auto	5.571	4584017	5018733	26	5.2151	ng/mL	----
PFTeDA-13C_IS	Auto	5.571	4584017	4584017	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.221	1761609	1761609	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.221	1761609	5018733	26	5.0438	ng/mL	----
FOSA	Auto	5.183	391	1761609	18	0.0008	ng/mL	----
N-MeFOSAA	ND(W/B)	----	----	934108	19	----	ng/mL	----
N-MeFOSAA-d3	Auto	4.992	934108	5018733	26	5.0199	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.992	934108	934108	19	5.0000	ng/mL	----

Sample Information
Sample Type: PEG+PPG+Raffinose

Tuning Condition
Detector Adjustment: Off
Resolution Adjustment: Off
FWHM of Spectrum: 0.70
Sensitivity Adjustment: Off
Mass Calibration: Off

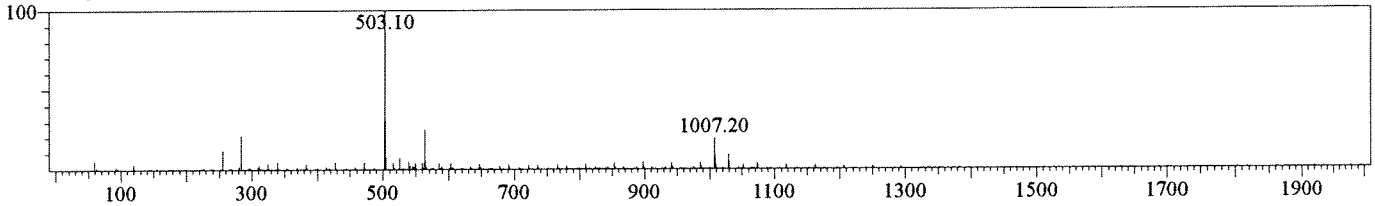
Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 1/18/2019 3:22:00 PM
Acquisition Mode: Q1 Scan(Use CID Gas)

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: 0.87 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 400(settings : 400) C
Q1 RF Gain: 5000
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: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile


Int.: 15310944 FWHM: 0.71 m/z : 503.15 Mag.: 1
Int.: 3774999 FWHM: 0.77 m/z : 1007.30 Mag.: 5

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	0.71	15310944
1007.30	1007.20	-0.10	0.77	3774999

0<0.5
cm
1/21/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+90.0	+130.0	+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

JAN 2 2 2019

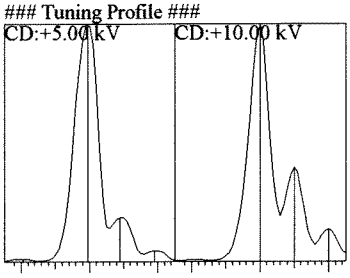
Sample Information
Sample Type: PEG+PPG+Raffinose

Tuning Condition
Detector Adjustment: Off
Resolution Adjustment: Off
FWHM of Spectrum: 0.70
Sensitivity Adjustment: Off
Mass Calibration: Off

Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 1/18/2019 3:25:01 PM
Acquisition Mode: Q3 Scan(Use CID Gas)

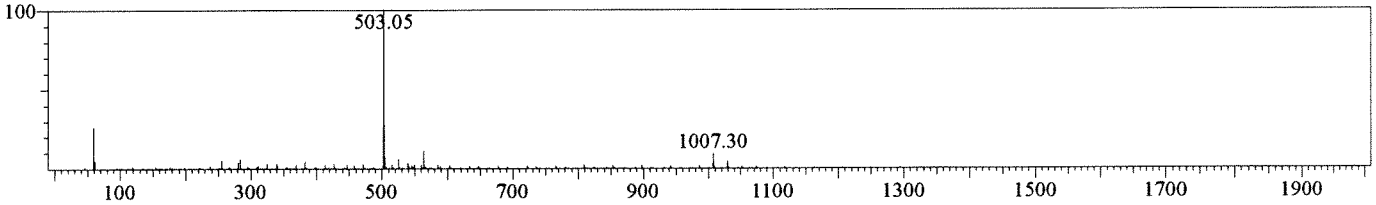
Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 0.00(settings : 10.00) L/min
CID Gas Flow: 270(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.87 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 400(settings : 400) C
Q1 RF Gain: ---
Q1 RF Offset: ---
Q3 RF Gain: 5000
Q3 RF Offset: 5000
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: 3.5 V
Conversion Dynode: +10.00 kV
Detector: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Int.: 13347994 FWHM: 0.78 m/z : 503.15 Mag.: 1
Int.: 1798398 FWHM: 0.67 m/z : 1007.30 Mag.: 11

Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 503.05 (20000000)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15	503.05	-0.10	0.78	13347994
1007.30	1007.30	0.00	0.67	1798398

0<0.5
cm
1/21/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+90.0	+130.0	+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

JAN 2 2 2019

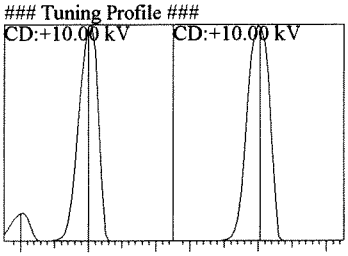
Sample Information
Sample Type: PEG+PPG+Raffinose

Tuning Condition
Detector Adjustment: Off
Resolution Adjustment: Off
FWHM of Spectrum: 0.70
Sensitivity Adjustment: Off
Mass Calibration: Off

Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 1/18/2019 3:26:29 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: 0.87 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 5000
Q1 RF Offset: 5000
Q3 RF Gain: 5000
Q3 RF Offset: 5014
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: -0.5 V
Conversion Dynode: +10.00 kV
Detector: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

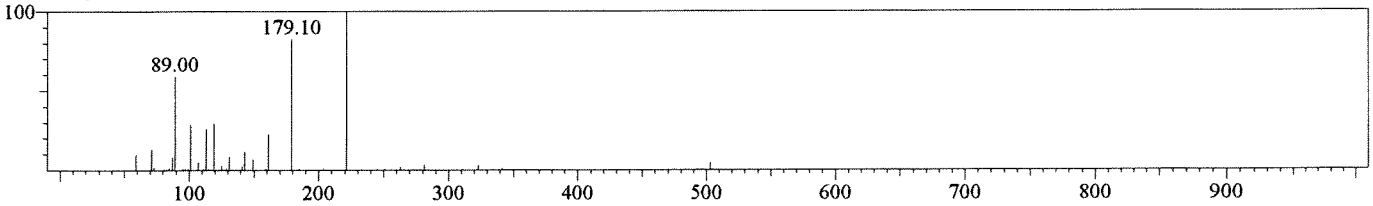
Tuning Profile



Int.: 1696550 FWHM: 0.65 m/z : 89.00 Pre m/z: 503.15 Mag.: 11

Int.: 2407323 FWHM: 0.76 m/z : 179.05 Pre m/z: 503.15 Mag.: 8

Scan Range: 2.00 - 553.15 Scan Speed: 30 u/s Base Peak: 221.10 (2966034) Pre m/z: 503.15



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15 > 89.00	89.00	0.00	0.65	1696550
503.15 > 179.05	179.10	0.05	0.76	2407323

0.6-0.5
cm
1/21/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+100.0	+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

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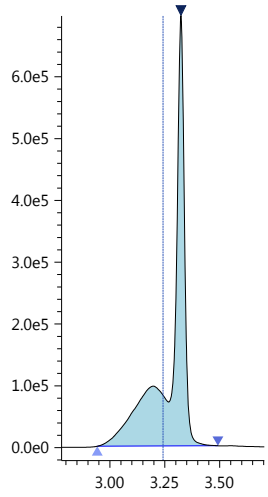
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSA-d3_IS	Auto	5.611	606317	606317	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.611	606317	5018733	26	4.9179	ng/mL	----
N-MeFOSA	M	5.612	1993	606317	1	0.0129	ng/mL	----
N-MeFOSE-d7	Auto	5.584	747659	5018733	26	5.0123	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.584	747659	747659	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	747659	20	----	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	893186	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.088	893186	893186	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.088	893186	5018733	26	5.0006	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.749	933622	933622	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.749	933622	5018733	26	4.8498	ng/mL	----
N-EtFOSA	M	5.758	480	933622	23	0.0161	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.715	760743	760743	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.715	760743	5018733	26	4.6264	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	760743	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.070	5018733	5018733	26	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	988190	16	----	ng/mL	----
PFNS	ND(W/B)	----	----	661357	13	----	ng/mL	----

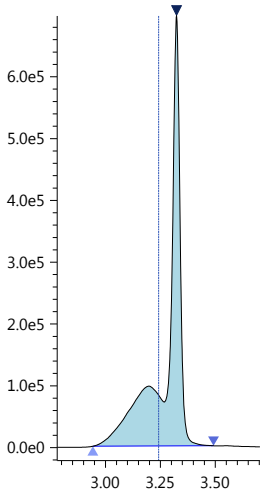
PFBA-13C_IS

Conc 5.0000
RT 3.323 Area 2712852
ISTD 216.90>172.15 (-) 6.98e5



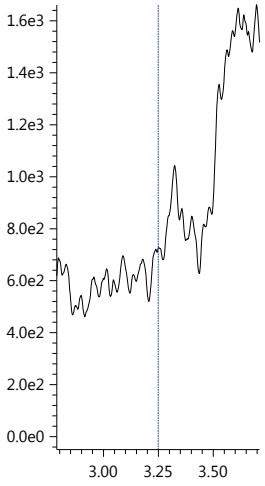
PFBA-13C

Conc 5.0078
RT 3.323 Area 2712852
Q 216.90>172.15 (-) 6.98e5



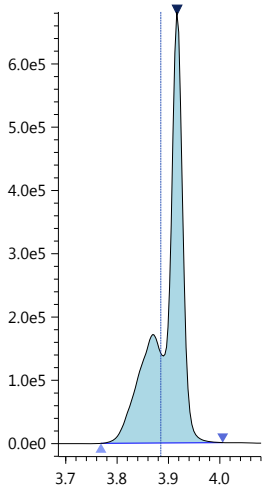
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.66e3



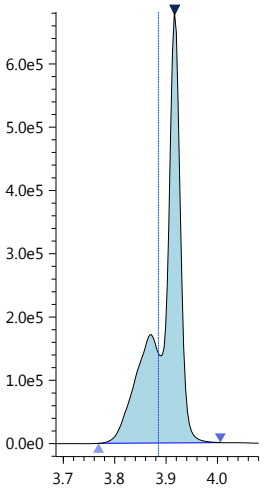
PFPeA-13C_IS

Conc 5.0000
RT 3.917 Area 1653265
ISTD 267.90>223.00 (-) 6.82e5



PFPeA-13C

Conc 5.0123
RT 3.917 Area 1653265
Q 267.90>223.00 (-) 6.82e5



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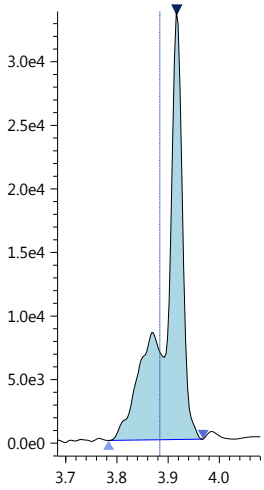
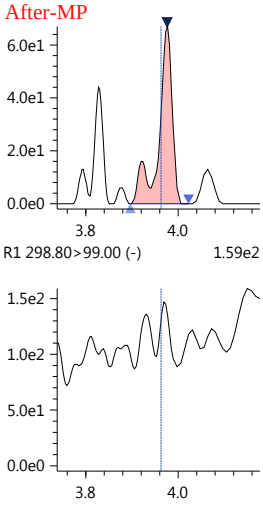
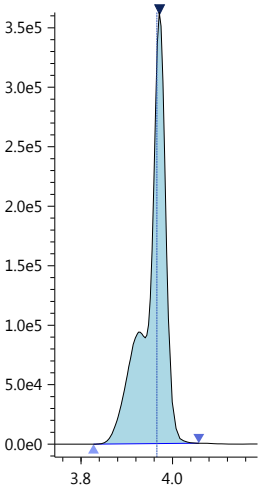
PFPeA
Conc 0.0062
RT 3.917 Area 80099
Q 263.05>219.10 (-) 3.40e4



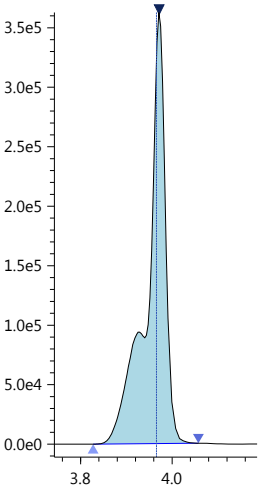
PFBS_1
Conc 0.0007
RT 3.976 Area 135
R#1 51.22 (0.00)
Q 299.00>80.00 (-) 6.70e1



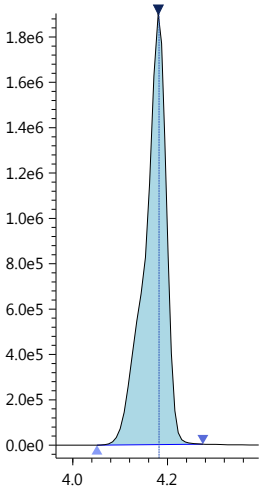
PFBS-13C
Conc 5.0092
RT 3.972 Area 988190
Q 301.80>80.00 (-) 3.63e5



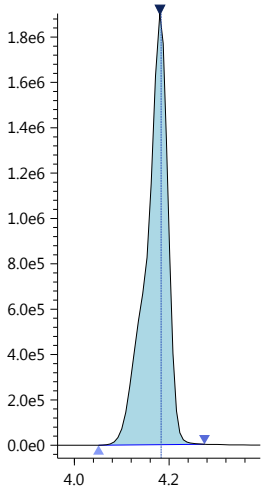
PFBS-13C_IS
Conc 5.0000
RT 3.972 Area 988190
ISTD 301.80>80.00 (-) 3.63e5



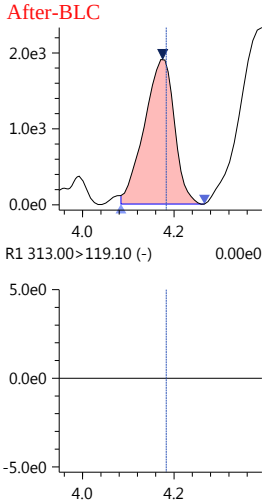
PFHxA-13C_IS
Conc 5.0000
RT 4.181 Area 5943791
ISTD 314.90>270.10 (-) 1.90e6



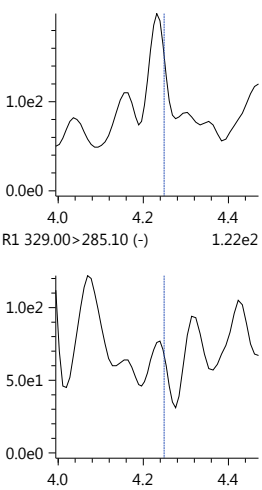
PFHxA-13C
Conc 5.2963
RT 4.181 Area 5943791
Q 314.90>270.10 (-) 1.90e6



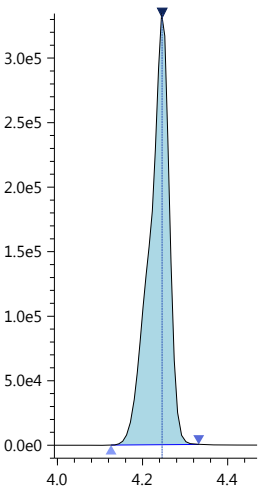
PFHxA
Conc 0.0097
RT 4.175 Area 8699
R#1 0.00 (0.00)
Q 313.00>269.00 (-) 2.33e3



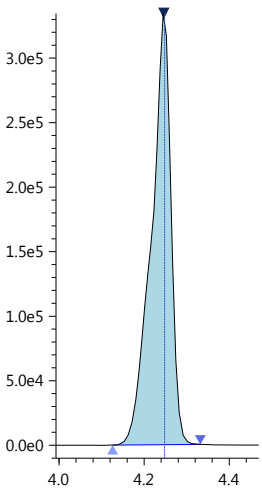
HPFO_DA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 329.00>169.00 (-) 1.99e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.246 Area 1071264
ISTD 332.00>286.80 (-) 3.35e5



HFPO_DA-13C
Conc 5.0870
RT 4.246 Area 1071264
Q 332.00>286.80 (-) 3.35e5



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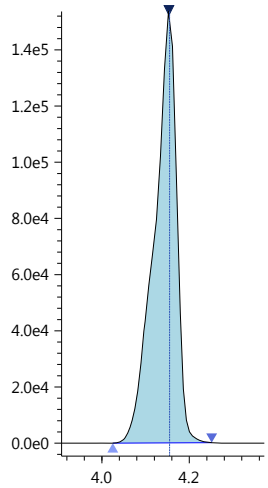
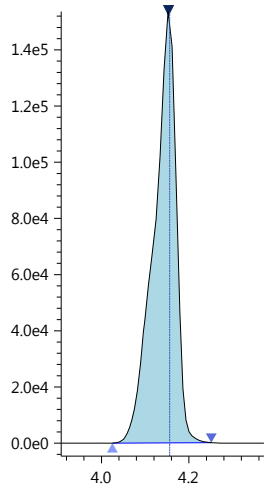
4_2-FTS-13C_IS
Conc 5.0000
RT 4.153 Area 543161

ISTD 328.80>309.05 (-) 1.54e5



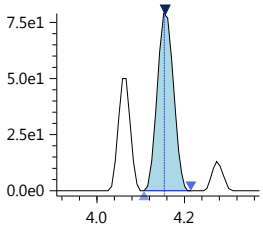
4_2-FTS-13C
Conc 4.8302
RT 4.153 Area 543161

Q 328.80>309.05 (-) 1.54e5

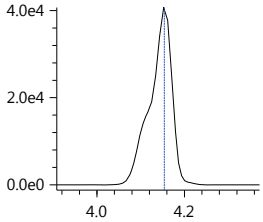


4_2-FTS_1
Conc 0.0020
RT 4.156 Area 207
R#1 39224.36 (0.00)

Q 327.00>307.05 (-) 7.90e1



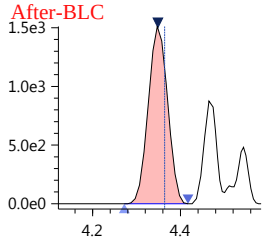
R1 327.00>81.10 (-) 4.07e4



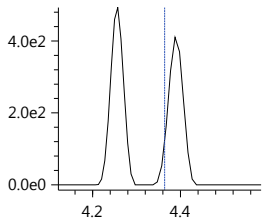
PFHpA
Conc 0.0147
RT 4.349 Area 4637
R#1 0.00 (0.00)

Q 362.90>319.00 (-) 1.51e3

After-BLC

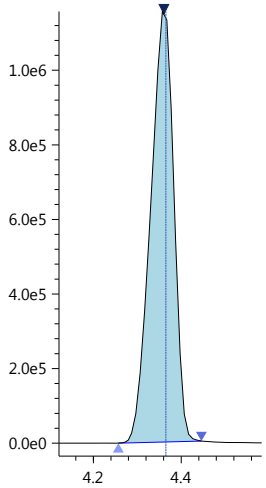


R1 362.90>169.00 (-) 4.93e2



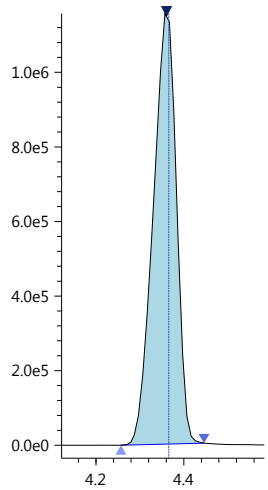
PFHpA-13C_IS
Conc 5.0000
RT 4.361 Area 4249284

ISTD 366.90>322.10 (-) 1.16e6



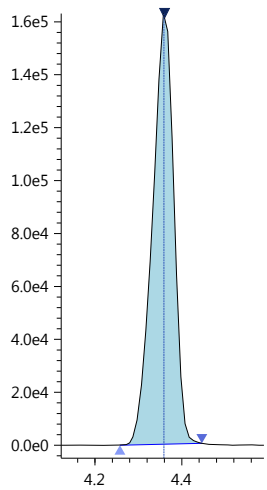
PFHpA-13C
Conc 4.6092
RT 4.361 Area 4249284

Q 366.90>322.10 (-) 1.16e6



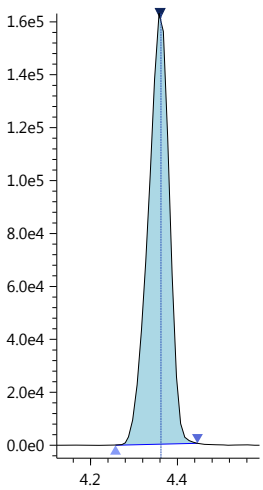
PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 557872

ISTD 402.70>84.05 (-) 1.63e5



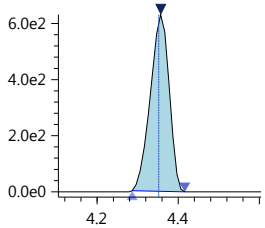
PFHxS-18O
Conc 4.9956
RT 4.360 Area 557872

Q 402.70>84.05 (-) 1.63e5

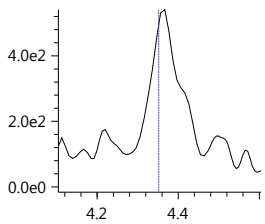


PFHxS_1
Conc 0.0184
RT 4.357 Area 2035
R#1 50.89 (0.00)

Q 399.00>80.00 (-) 6.32e2

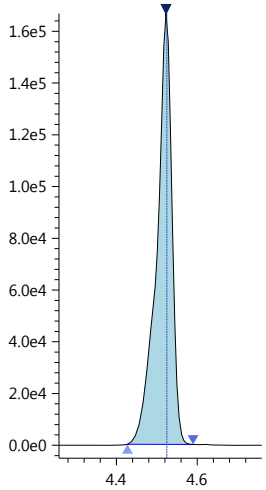


R1 399.00>99.00 (-) 5.41e2



6_2-FTS-13C
Conc 5.4797
RT 4.523 Area 433486

Q 428.90>409.00 (-) 1.67e5



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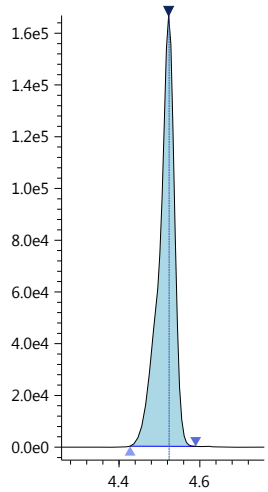
6_2-FTS-13C_IS

Conc 5.0000
RT 4.523 Area 433486

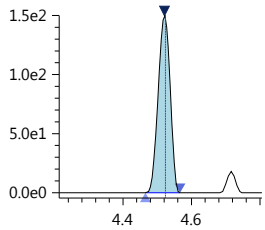
ISTD 428.90>409.00 (-) 1.67e5



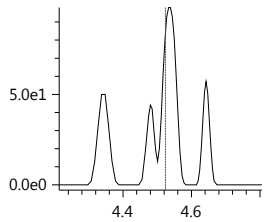
6_2-FTS_1

Conc 0.0043
RT 4.521 Area 366
R#1 32.03 (0.00)

Q 427.00>407.00 (-) 1.50e2



R1 427.00>80.90 (-) 9.80e1

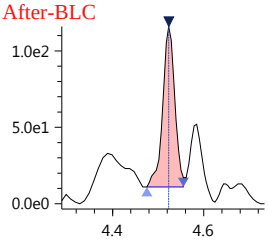


PFHpS_1

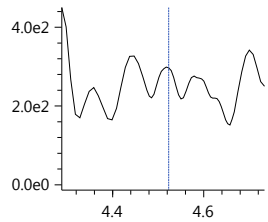
Conc 0.0015
RT 4.523 Area 194
R#1 65.25 (0.00)

Q 449.00>80.15 (-) 1.16e2

After-BLC



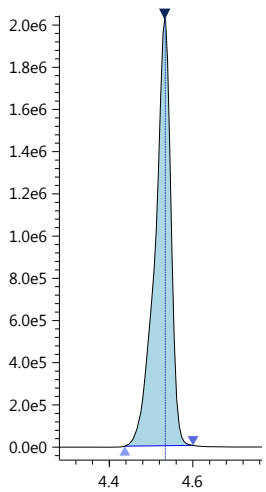
R1 449.00>99.20 (-) 4.50e2



PFOA-13C_IS

Conc 5.0000
RT 4.533 Area 5348460

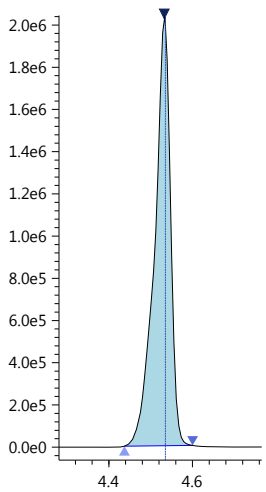
ISTD 416.80>372.05 (-) 2.05e6



PFOA-13C

Conc 5.0920
RT 4.533 Area 5348460

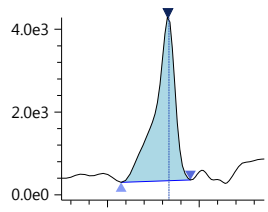
Q 416.80>372.05 (-) 2.05e6



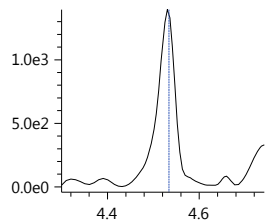
PFOA

Conc 0.0089
RT 4.532 Area 11852
R#1 33.55 (0.00)

Q 413.00>369.00 (-) 4.28e3



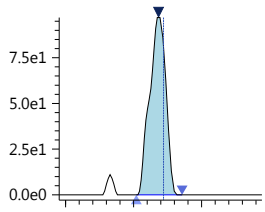
R1 413.00>169.10 (-) 1.40e3



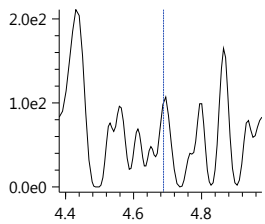
PFOS_1

Conc 0.0034
RT 4.674 Area 326
R#1 3.00 (0.00)

Q 499.00>80.00 (-) 9.70e1



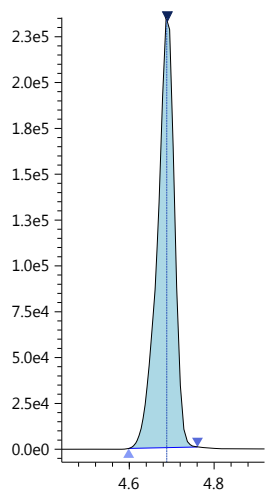
R1 499.00>99.00 (-) 2.11e2



PFOS-13C_IS

Conc 5.0000
RT 4.690 Area 661357

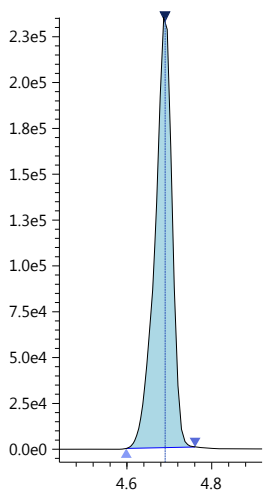
ISTD 502.80>80.05 (-) 2.35e5



PFOS-13C

Conc 5.2527
RT 4.690 Area 661357

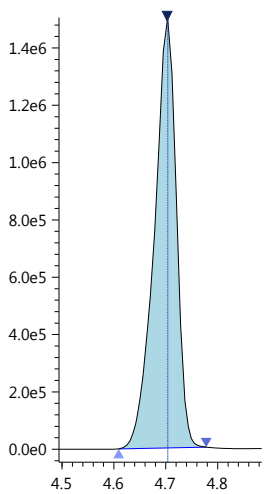
Q 502.80>80.05 (-) 2.35e5



PFNA-13C_IS

Conc 5.0000
RT 4.703 Area 4422128

ISTD 467.80>423.00 (-) 1.51e6



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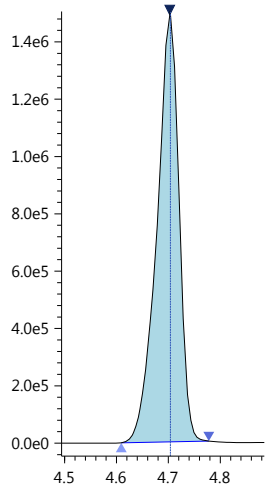
PFNA-13C

Conc 4.8813
RT 4.703 Area 4422128

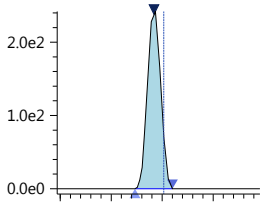
Q 467.80>423.00 (-) 1.51e6



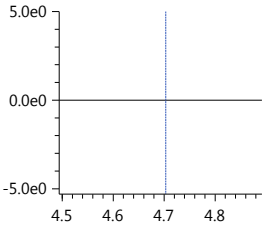
PFNA

Conc 0.0058
RT 4.684 Area 444
R#1 0.00 (0.00)

Q 463.00>418.90 (-) 2.42e2



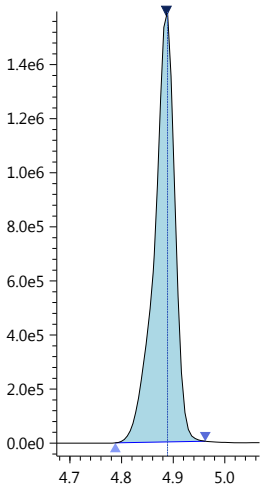
R1 463.00>219.00 (-) 0.00e0



PFDA-13C_IS

Conc 5.0000
RT 4.887 Area 4391079

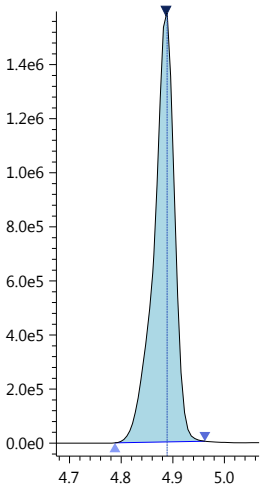
ISTD 514.80>469.95 (-) 1.60e6



PFDA-13C

Conc 5.2315
RT 4.887 Area 4391079

Q 514.80>469.95 (-) 1.60e6

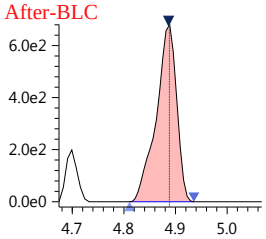


PFDA

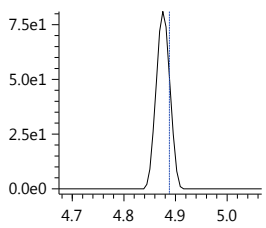
Conc 0.0025
RT 4.886 Area 1862
R#1 7.43 (0.00)

Q 513.00>468.80 (-) 6.81e2

After-BLC



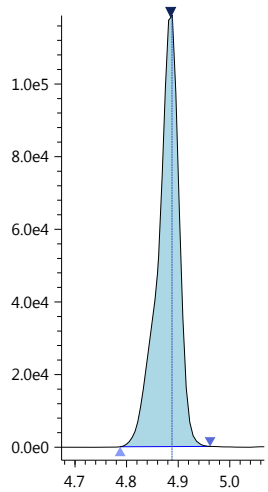
R1 513.00>219.10 (-) 8.10e1



8_2-FTS-13C_IS

Conc 5.0000
RT 4.885 Area 334975

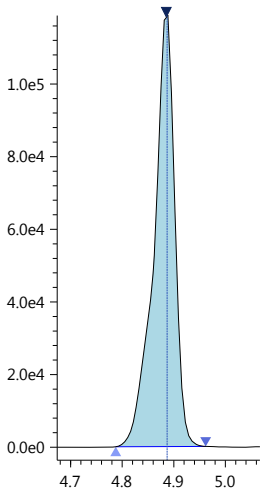
ISTD 528.80>509.00 (-) 1.19e5



8_2-FTS-13C

Conc 5.3710
RT 4.885 Area 334975

Q 528.80>509.00 (-) 1.19e5

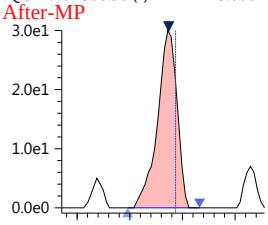


8_2-FTS_1

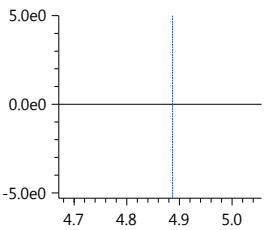
Conc 0.0015
RT 4.874 Area 77
R#1 0.00 (0.00)

Q 527.10>506.90 (-) 3.00e1

After-MP



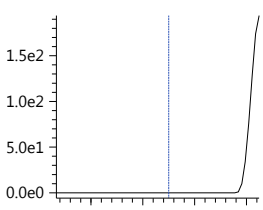
R1 527.20>487.00 (-) 0.00e0



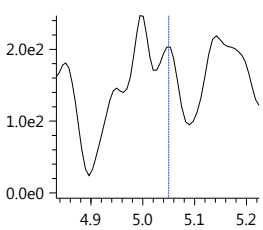
PFDS_1

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

Q 599.00>79.90 (-) 1.94e2



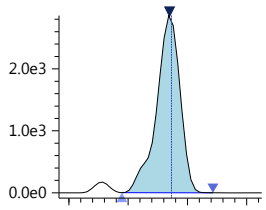
R1 599.00>99.10 (-) 2.47e2



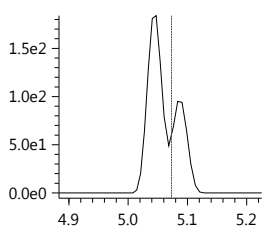
PFUnA

Conc 0.0062
RT 5.070 Area 7888
R#1 1.68 (0.00)

Q 563.00>518.90 (-) 2.86e3



R1 563.00>219.00 (-) 1.84e2



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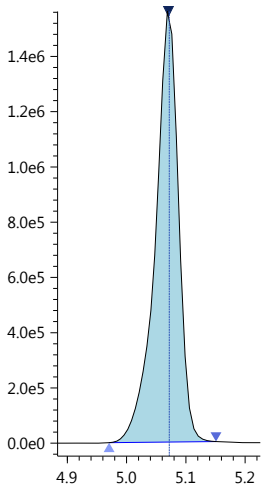
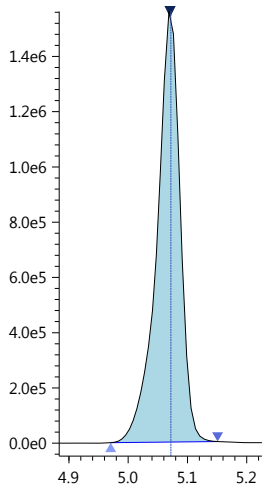
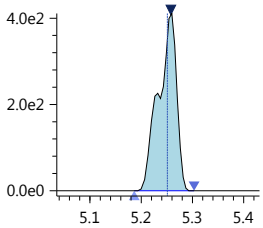
PFUnA-13C_IS
Conc 5.0000
RT 5.071 Area 4249132
ISTD 564.80>519.95 (-) 1.56e6



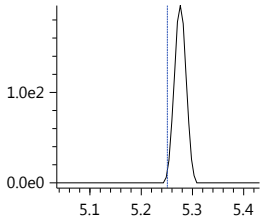
PFUnA-13C
Conc 5.2048
RT 5.071 Area 4249132
Q 564.80>519.95 (-) 1.56e6



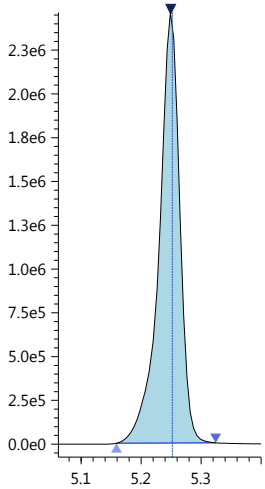
PFDoA
Conc 0.0043
RT 5.258 Area 1015
R#1 4.46 (0.00)
Q 613.05>569.00 (-) 4.11e2



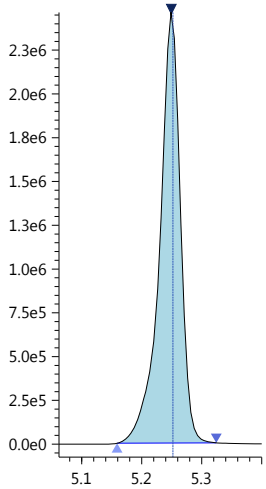
R1 613.05>169.00 (-) 1.96e2



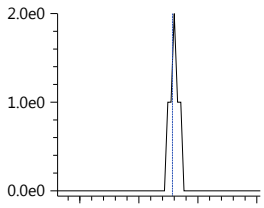
PFDoA-13C
Conc 5.2745
RT 5.249 Area 5885748
Q 614.80>569.95 (-) 2.47e6



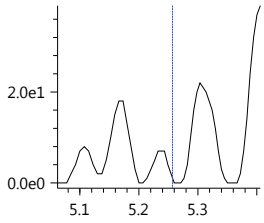
PFDoA-13C_IS
Conc 5.0000
RT 5.249 Area 5885748
ISTD 614.80>569.95 (-) 2.47e6



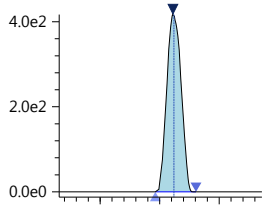
10_2-FtS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 627.00>606.95 (-) 2.00e0



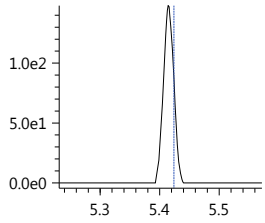
R1 627.00>81.25 (-) 3.90e1



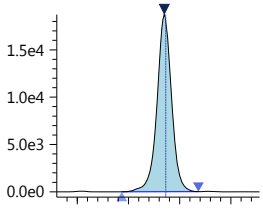
PFTrDA
Conc 0.0043
RT 5.422 Area 707
R#1 35.14 (0.00)
Q 663.00>618.90 (-) 4.17e2



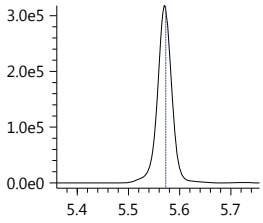
R1 662.90>169.00 (-) 1.48e2



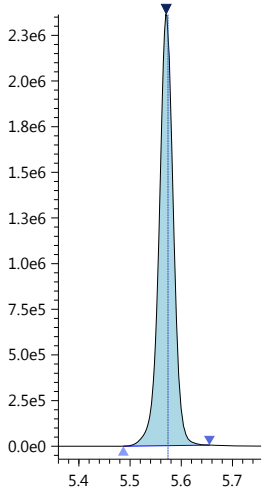
PFTeDA
Conc 0.0242
RT 5.570 Area 36962
R#1 1715.93 (0.00)
Q 713.40>669.00 (-) 1.87e4



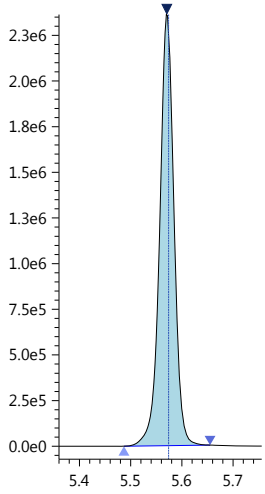
R1 713.40>169.10 (-) 3.18e5



PFTeDA-13C
Conc 5.2151
RT 5.571 Area 4584017
Q 714.70>669.90 (-) 2.36e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.571 Area 4584017
ISTD 714.70>669.90 (-) 2.36e6



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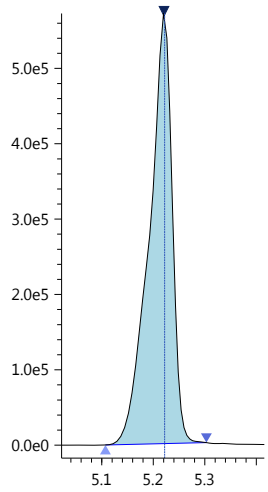
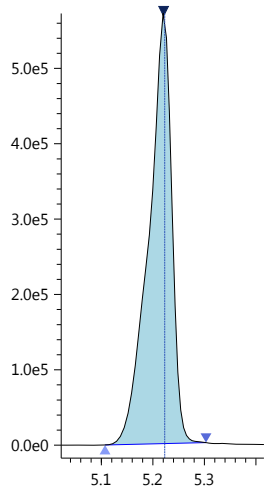
FOSA-13C_IS
Conc 5.0000
RT 5.221 Area 1761609

ISTD 506.00>78.05 (-) 5.73e5



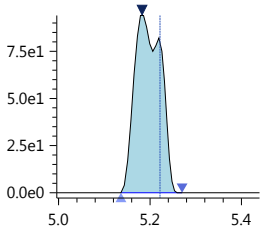
FOSA-13C
Conc 5.0438
RT 5.221 Area 1761609

Q 506.00>78.05 (-) 5.73e5

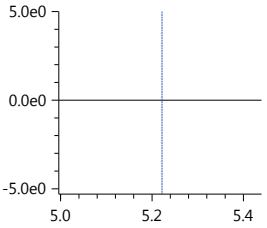


FOSA
Conc 0.0008
RT 5.183 Area 391
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 9.40e1

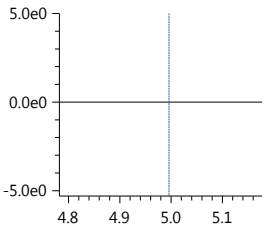


R1 498.20>64.10 (-) 0.00e0

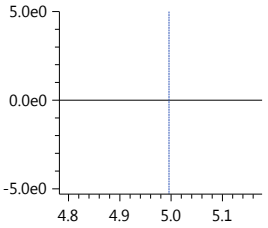


N-MeFOSAA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 570.20>419.00 (-) 0.00e0

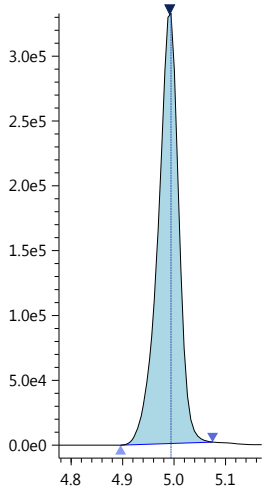


R1 570.20>512.00 (-) 0.00e0



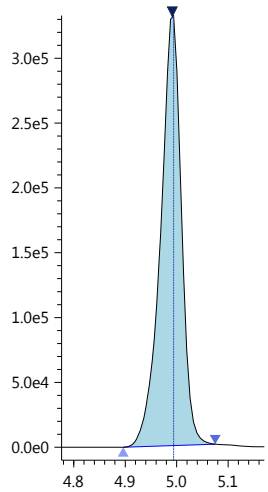
N-MeFOSAA-d3
Conc 5.0199
RT 4.992 Area 934108

Q 572.80>419.05 (-) 3.33e5



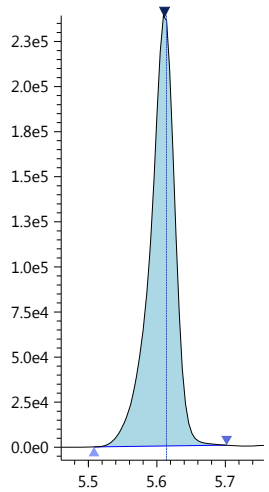
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.992 Area 934108

ISTD 572.80>419.05 (-) 3.33e5



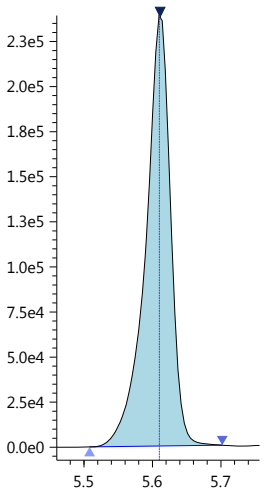
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.611 Area 606317

ISTD 514.90>168.90 (-) 2.39e5



N-MeFOSA-d3
Conc 4.9179
RT 5.611 Area 606317

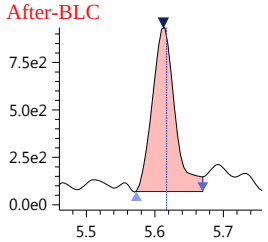
Q 514.90>168.90 (-) 2.39e5



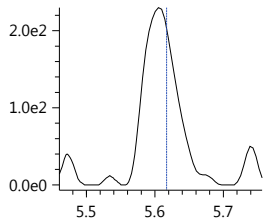
N-MeFOSA
Conc 0.0129
RT 5.612 Area 1993
R#1 22.29 (0.00)

Q 512.00>169.10 (-) 9.34e2

After-BLC

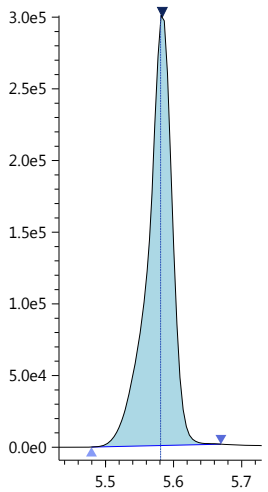


R1 512.00>219.00 (-) 2.30e2



N-MeFOSE-d7
Conc 5.0123
RT 5.584 Area 747659

Q 622.70>59.10 (-) 3.01e5



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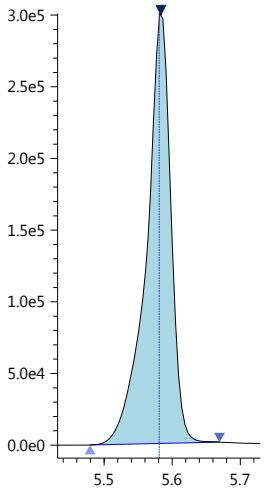
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.584 Area 747659

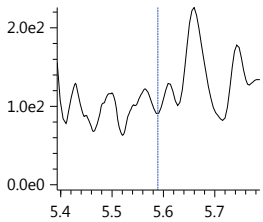
ISTD 622.70>59.10 (-) 3.01e5



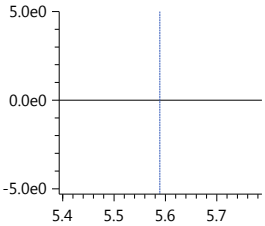
N-MeFOSE

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

Q 616.00>59.00 (-) 2.26e2



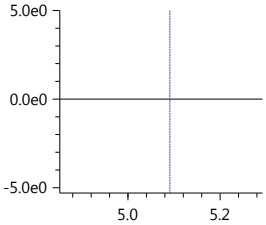
R1 556.00>121.20 (-) 0.00e0



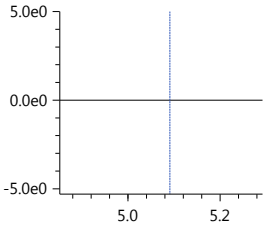
N-EtFOSAA

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

Q 584.20>418.95 (-) 0.00e0



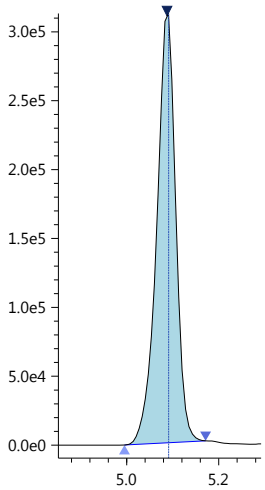
R1 584.20>526.10 (-) 0.00e0



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.088 Area 893186

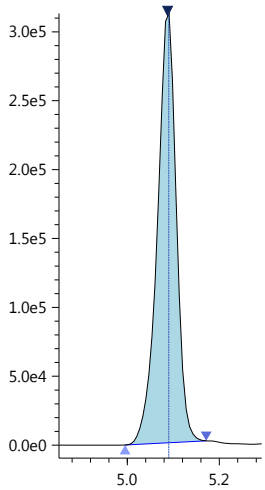
ISTD 588.80>419.00 (-) 3.13e5



N-EtFOSAA-d5

Conc 5.0006
RT 5.088 Area 893186

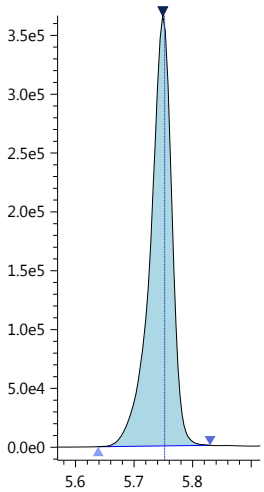
Q 588.80>419.00 (-) 3.13e5



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.749 Area 933622

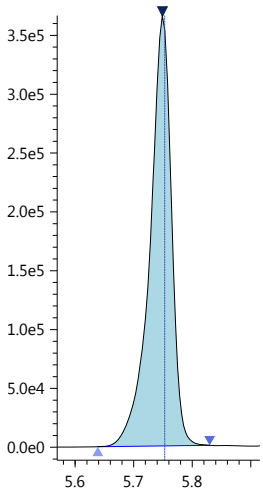
ISTD 530.90>169.15 (-) 3.67e5



N-EtFOSA-d9

Conc 4.8498
RT 5.749 Area 933622

Q 530.90>169.15 (-) 3.67e5

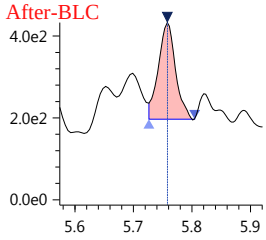


N-EtFOSA

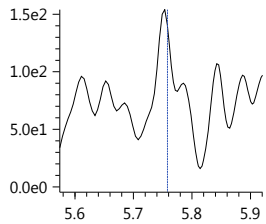
Conc 0.0161
RT 5.758 Area 480
R#1 39.11 (0.00)

Q 526.90>169.10 (-) 4.33e2

After-BLC



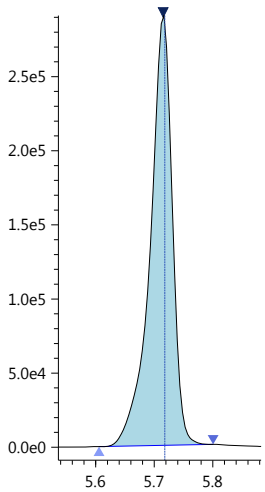
R1 526.90>219.00 (-) 1.54e2



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.715 Area 760743

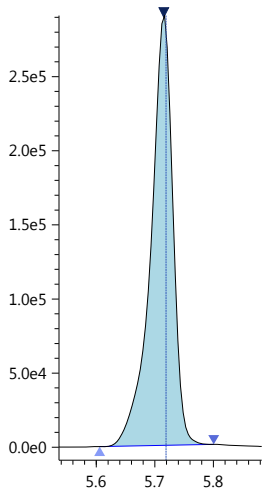
ISTD 638.70>59.10 (-) 2.91e5



N-EtFOSE-d9

Conc 4.6264
RT 5.715 Area 760743

Q 638.70>59.10 (-) 2.91e5



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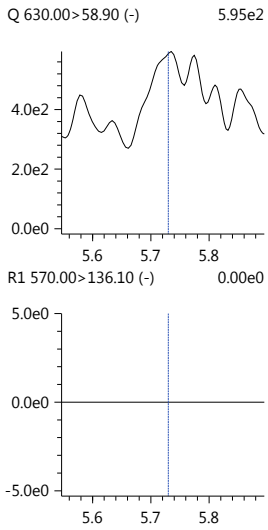
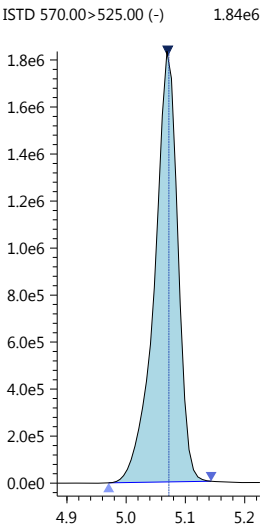
N-EtFOSE

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



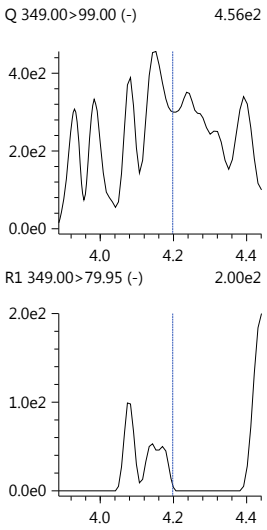
13C7-PFUnDA_IS

Conc 5.0000
RT 5.070 Area 5018733



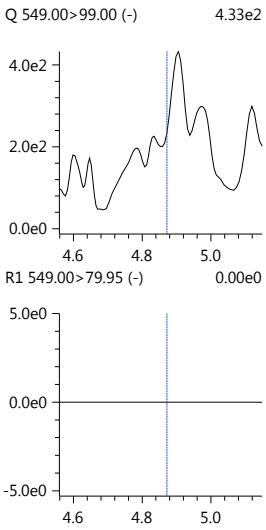
PFPeS

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



PFNS

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



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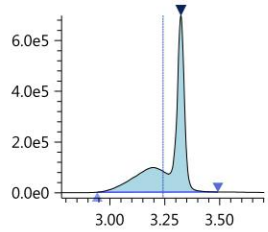
Project File: J:\LCMS06\Data\190118_b1\190118_b1.damlp
Flags File: J:\LCMS06\Data\190118_b1\190118_b1.damlp

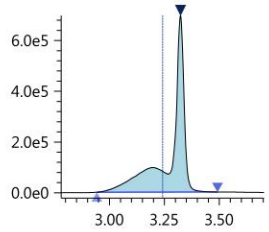
190118_022

Sample ID: IB
Date acquired: 1/18/2019 5:36:54 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_022.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

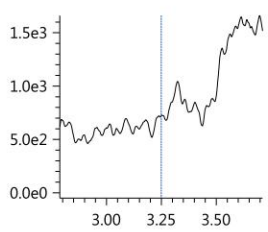
PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2712852
ISTD 216.90>172.15 (-) 6.98e5



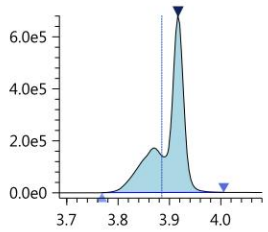
PFBA-13C
Conc 5.0078
RT 3.323 Area 2712852
Q 216.90>172.15 (-) 6.98e5



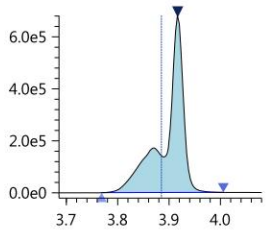
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.66e3



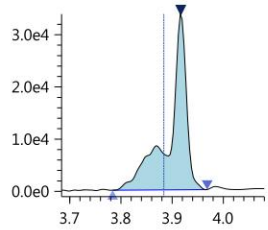
PFPeA-13C_IS
Conc 5.0000
RT 3.917 Area 1653265
ISTD 267.90>223.00 (-) 6.82e5



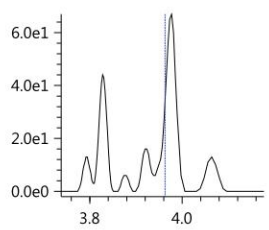
PFPeA-13C
Conc 5.0123
RT 3.917 Area 1653265
Q 267.90>223.00 (-) 6.82e5



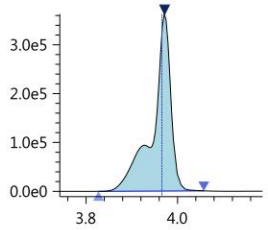
PFPeA
Conc 0.0210
RT 3.917 Area 80099
Q 263.05>219.10 (-) 3.40e4



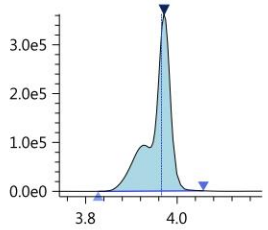
PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 6.70e1



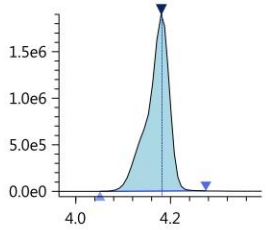
PFBS-13C
Conc 5.0092
RT 3.972 Area 988190
Q 301.80>80.00 (-) 3.63e5



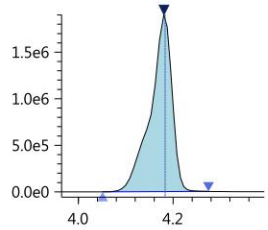
PFBS-13C_IS
Conc 5.0000
RT 3.972 Area 988190
ISTD 301.80>80.00 (-) 3.63e5



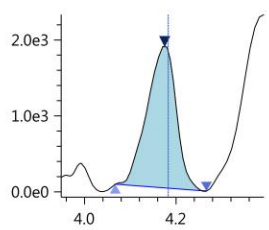
PFHxA-13C_IS
Conc 5.0000
RT 4.181 Area 5943791
ISTD 314.90>270.10 (-) 1.90e6



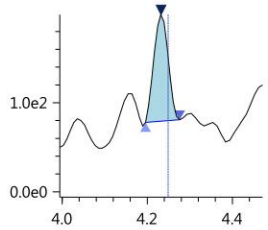
PFHxA-13C
Conc 5.2963
RT 4.181 Area 5943791
Q 314.90>270.10 (-) 1.90e6



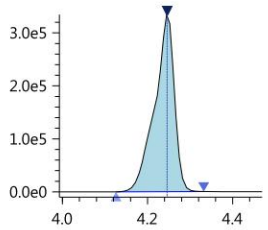
PFHxA
Conc 0.0017
RT 4.175 Area 8264
Q 313.00>269.00 (-) 2.33e3



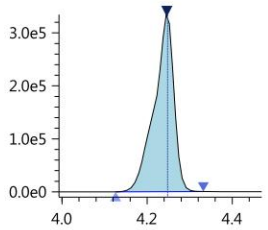
HPFO_DA
Conc 0.0003
RT 4.233 Area 280
Q 329.00>169.00 (-) 1.99e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.246 Area 1071264
ISTD 332.00>286.80 (-) 3.35e5



HFPO_DA-13C
Conc 5.0870
RT 4.246 Area 1071264
Q 332.00>286.80 (-) 3.35e5



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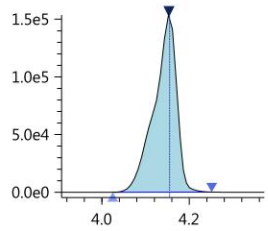
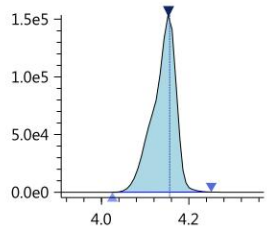
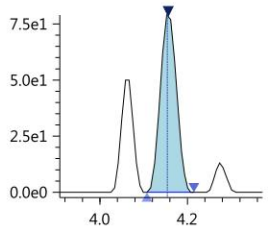
4_2-FTS-13C_IS
Conc 5.0000
RT 4.153 Area 543161
ISTD 328.80>309.05 (-) 1.54e5



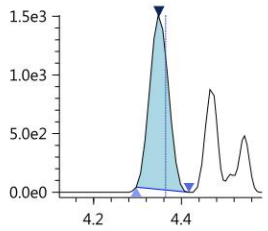
4_2-FTS-13C
Conc 4.8302
RT 4.153 Area 543161
Q 328.80>309.05 (-) 1.54e5



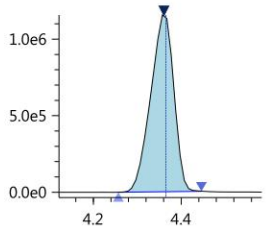
4_2-FTS_1
Conc 0.0005
RT 4.156 Area 207
Q 327.00>307.05 (-) 7.90e1



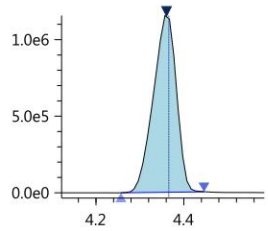
PFHpA
Conc 0.0012
RT 4.349 Area 4462
Q 362.90>319.00 (-) 1.51e3



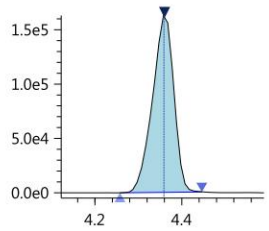
PFHpA-13C_IS
Conc 5.0000
RT 4.361 Area 4249284
ISTD 366.90>322.10 (-) 1.16e6



PFHpA-13C
Conc 4.6092
RT 4.361 Area 4249284
Q 366.90>322.10 (-) 1.16e6



PFHxS-18O_IS
Conc 5.0000
RT 4.360 Area 557872
ISTD 402.70>84.05 (-) 1.63e5



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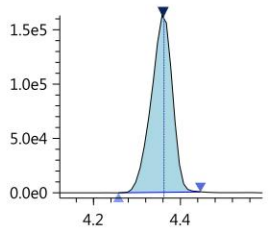
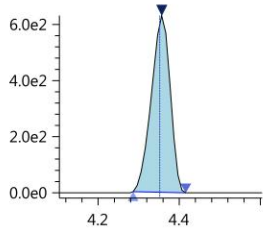
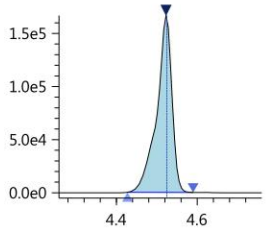
Conc 4.9956
RT 4.360 Area 557872
Q 402.70>84.05 (-) 1.63e5



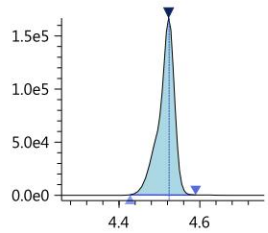
PFHxS_1
Conc 0.0041
RT 4.357 Area 2035
Q 399.00>80.00 (-) 6.32e2



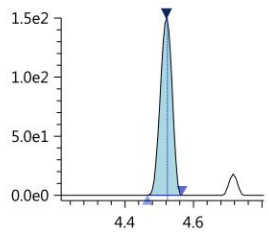
6_2-FTS-13C
Conc 5.4797
RT 4.523 Area 433486
Q 428.90>409.00 (-) 1.67e5



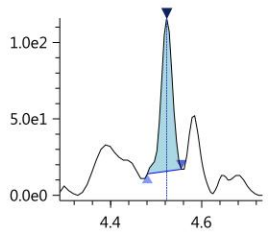
6_2-FTS-13C_IS
Conc 5.0000
RT 4.523 Area 433486
ISTD 428.90>409.00 (-) 1.67e5



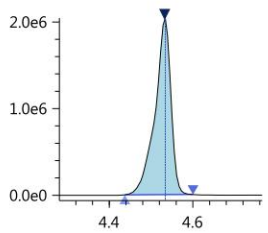
6_2-FTS_1
Conc 0.0010
RT 4.521 Area 366
Q 427.00>407.00 (-) 1.50e2



PFHpS_1
Conc 0.0003
RT 4.523 Area 173
Q 449.00>80.15 (-) 1.16e2



PFOA-13C_IS
Conc 5.0000
RT 4.533 Area 5348460
ISTD 416.80>372.05 (-) 2.05e6



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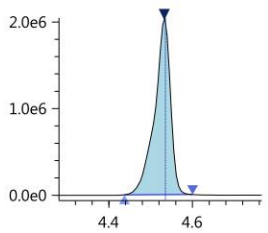
Conc 5.0920
RT 4.533 Area 5348460
Q 416.80>372.05 (-) 2.05e6



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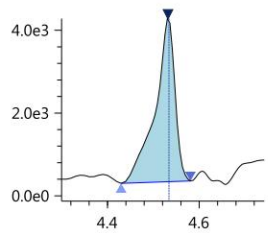
Conc 0.0029
RT 4.532 Area 11852
Q 413.00>369.00 (-) 4.28e3



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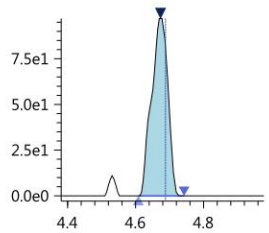
Conc 0.0008
RT 4.674 Area 326
Q 499.00>80.00 (-) 9.70e1



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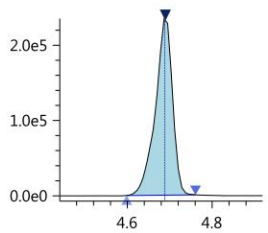
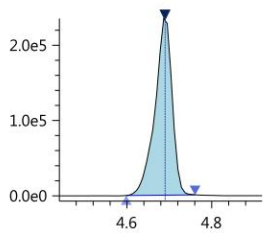
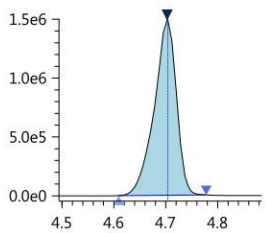
Conc 5.0000
RT 4.690 Area 661357
ISTD 502.80>80.05 (-) 2.35e5



PFOS-13C
Conc 5.2527
RT 4.690 Area 661357
Q 502.80>80.05 (-) 2.35e5



PFNA-13C_IS
Conc 5.0000
RT 4.703 Area 4422128
ISTD 467.80>423.00 (-) 1.51e6



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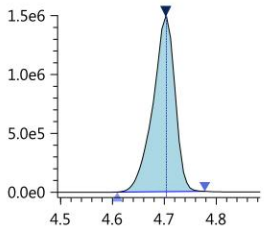
PFNA-13C
Conc 4.8813
RT 4.703 Area 4422128
Q 467.80>423.00 (-) 1.51e6



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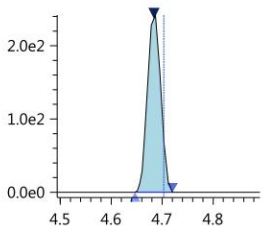
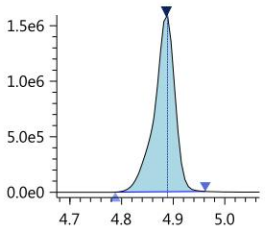
Conc 0.0002
RT 4.684 Area 444
Q 463.00>418.90 (-) 2.42e2



PFDA-13C_IS
Conc 5.0000
RT 4.887 Area 4391079
ISTD 514.80>469.95 (-) 1.60e6



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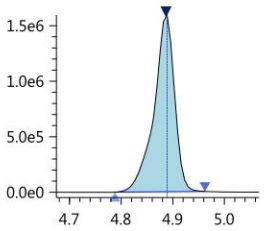
Q 514.80>469.95 (-) 1.60e6



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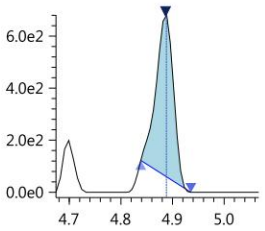
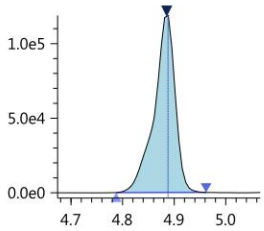
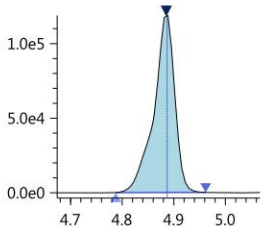
Conc 0.0004
RT 4.886 Area 1443
Q 513.00>468.80 (-) 6.81e2



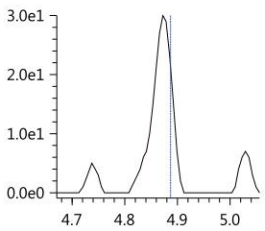
8_2-FTS-13C_IS
Conc 5.0000
RT 4.885 Area 334975
ISTD 528.80>509.00 (-) 1.19e5



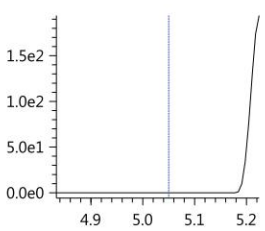
8_2-FTS-13C
Conc 5.3710
RT 4.885 Area 334975
Q 528.80>509.00 (-) 1.19e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 3.00e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.94e2



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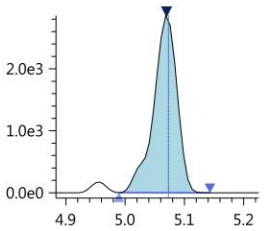
Conc 0.0025
RT 5.070 Area 7888
Q 563.00>518.90 (-) 2.86e3



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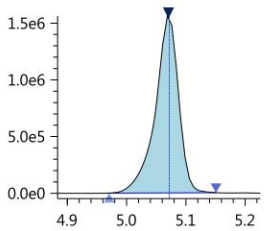
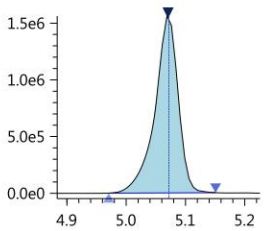
Conc 5.0000
RT 5.071 Area 4249132
ISTD 564.80>519.95 (-) 1.56e6



PFUnA-13C
Conc 5.2048
RT 5.071 Area 4249132
Q 564.80>519.95 (-) 1.56e6



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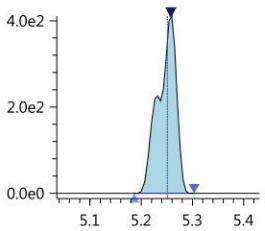
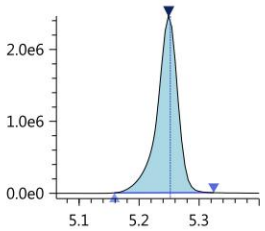
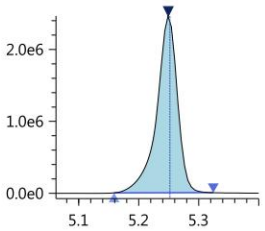
Conc 0.0004
RT 5.258 Area 1015
Q 613.05>569.00 (-) 4.11e2



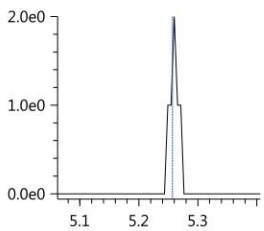
PFDoA-13C
Conc 5.2745
RT 5.249 Area 5885748
Q 614.80>569.95 (-) 2.47e6



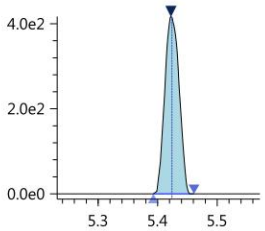
PFDoA-13C_IS
Conc 5.0000
RT 5.249 Area 5885748
ISTD 614.80>569.95 (-) 2.47e6



10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 2.00e0



PFTrDA
Conc 0.0002
RT 5.422 Area 707
Q 663.00>618.90 (-) 4.17e2



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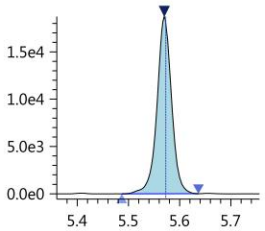
RT 5.570 Area 36962
Q 713.40>669.00 (-) 1.87e4



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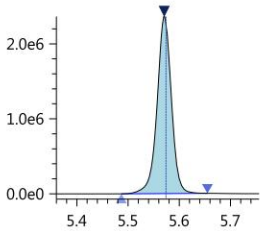
Conc 5.2151
RT 5.571 Area 4584017
Q 714.70>669.90 (-) 2.36e6



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Conc 5.0000
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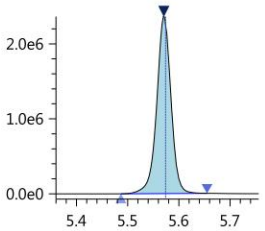
ISTD 714.70>669.90 (-) 2.36e6



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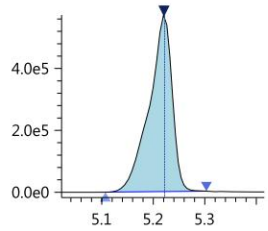
FOSA-13C_IS
Conc 5.0000
RT 5.221 Area 1761609
ISTD 506.00>78.05 (-) 5.73e5



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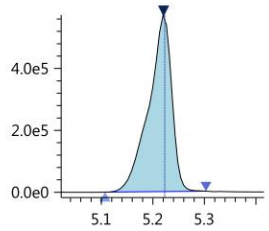
Conc 5.0438
RT 5.221 Area 1761609
Q 506.00>78.05 (-) 5.73e5



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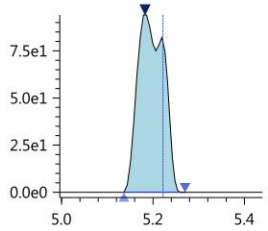
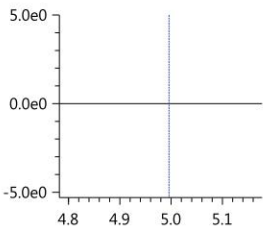
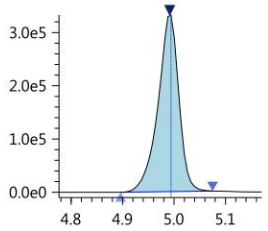
RT 5.183 Area 391
Q 498.20>78.00 (-) 9.40e1



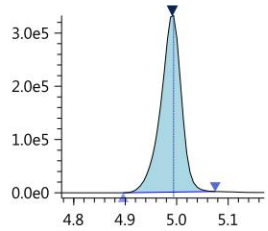
N-MeFOSAA
Conc ----
RT ---- Area ----
Q 570.20>419.00 (-) 0.00e0



N-MeFOSAA-d3
Conc 5.0199
RT 4.992 Area 934108
Q 572.80>419.05 (-) 3.33e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.992 Area 934108
ISTD 572.80>419.05 (-) 3.33e5



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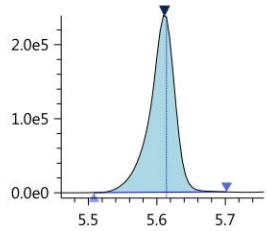
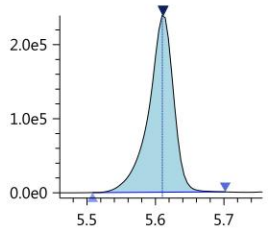
Conc 5.0000
RT 5.611 Area 606317
ISTD 514.90>168.90 (-) 2.39e5



N-MeFOSA-d3
Conc 4.9179
RT 5.611 Area 606317
Q 514.90>168.90 (-) 2.39e5



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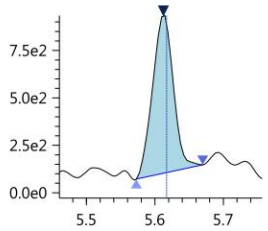
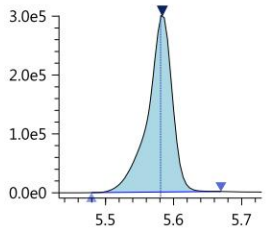
Conc 0.0025
RT 5.612 Area 1763
Q 512.00>169.10 (-) 9.34e2



N-MeFOSE-d7
Conc 5.0123
RT 5.584 Area 747659
Q 622.70>59.10 (-) 3.01e5



N-MeFOSE-d7_IS
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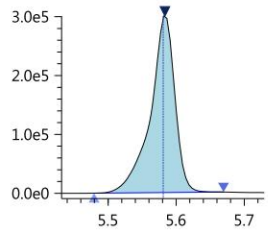
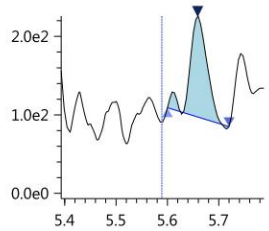
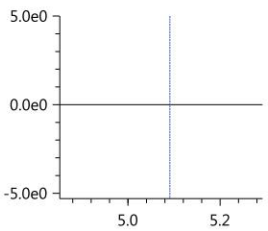
RT 5.584 Area 747659
ISTD 622.70>59.10 (-) 3.01e5



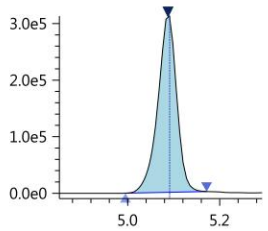
N-MeFOSE
Conc 0.0003
RT 5.659 Area 294
Q 616.00>59.00 (-) 2.26e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.088 Area 893186
ISTD 588.80>419.00 (-) 3.13e5



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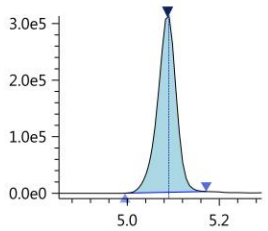
Conc 5.0006
RT 5.088 Area 893186
Q 588.80>419.00 (-) 3.13e5



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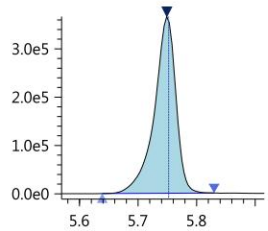
Conc 5.0000
RT 5.749 Area 933622
ISTD 530.90>169.15 (-) 3.67e5



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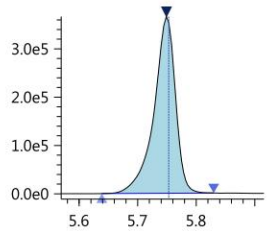
Conc 4.8498
RT 5.749 Area 933622
Q 530.90>169.15 (-) 3.67e5



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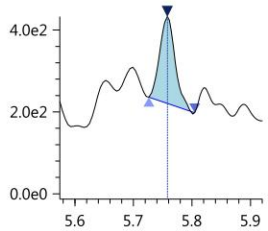
Conc 0.0028
RT 5.758 Area 386
Q 526.90>169.10 (-) 4.33e2



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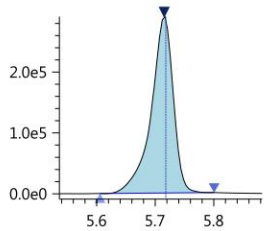
ISTD 638.70>59.10 (-) 2.91e5



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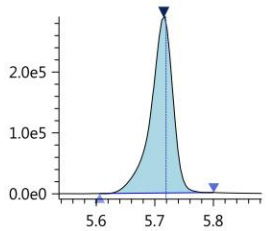

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N-EtFOSE

Conc 0.0020
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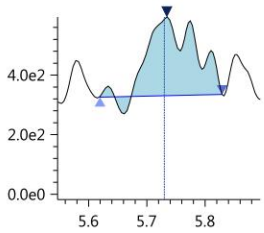
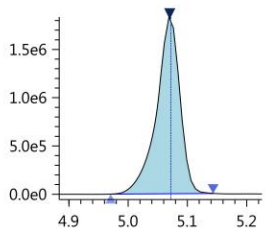
Q 630.00>58.90 (-) 5.95e2



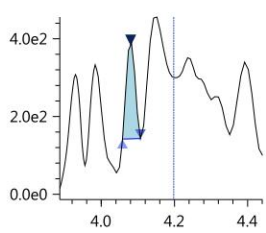
13C7-PFUnDA_IS

Conc 5.0000
RT 5.070 Area 5018733
ISTD 570.00>525.00 (-) 1.84e6



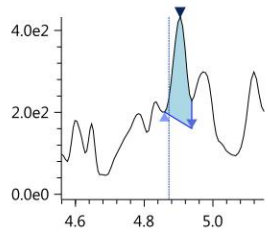
PFPeS

Conc 0.0010
RT 4.080 Area 409
Q 349.00>99.00 (-) 4.56e2



PFNS

Conc 0.0018
RT 4.904 Area 655
Q 549.00>99.00 (-) 4.33e2



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_023

Sample ID: 0.05 PPB ICAL
Date acquired: 1/18/2019 5:47:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_023.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.328	2767602	2767602	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.328	2767602	5043770	26	5.0835	ng/mL	5.0000
PFBA	M	3.328	29201	2767602	2	0.0531	ng/mL	0.0500
PFPeA-13C_IS	Auto	3.923	1720302	1720302	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.923	1720302	5043770	26	5.1896	ng/mL	5.0000
PFPeA	Auto	3.923	119764	1720302	4	0.0486	ng/mL	0.0500
PFBS_1	M	3.977	9220	1013316	16	0.0452	ng/mL	0.0444
PFBS-13C	Auto	3.979	1013316	5043770	26	5.1110	ng/mL	5.0000
PFBS-13C_IS	Auto	3.979	1013316	1013316	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.188	6118367	6118367	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.188	6118367	5043770	26	5.4248	ng/mL	5.0000
PFHxA	M	4.189	58128	6118367	6	0.0531	ng/mL	0.0500
HPFO_DA	M	4.252	10334	1096667	3	0.0464	ng/mL	0.0500
HFPO_DA-13C_IS	Auto	4.253	1096667	1096667	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.253	1096667	5043770	26	5.1818	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.160	522631	522631	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.160	522631	5043770	26	4.6246	ng/mL	5.0000
4_2-FTS_1	Auto	4.162	7542	522631	5	0.0748	ng/mL	0.0469
PFHpA	Auto	4.368	43784	5532946	8	0.0510	ng/mL	0.0500
PFHpA-13C_IS	Auto	4.369	5532946	5532946	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.369	5532946	5043770	26	5.9718	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.369	642794	642794	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.369	642794	5043770	26	5.7275	ng/mL	5.0000
PFHxS_1	Auto	4.361	7342	642794	7	0.0575	ng/mL	0.0457
6_2-FTS-13C	Auto	4.529	415303	5043770	26	5.2237	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.529	415303	415303	10	5.0000	ng/mL	5.0000
6_2-FTS_1	M	4.532	4818	415303	10	0.0586	ng/mL	0.0476
PFHpS_1	M	4.530	6631	642794	7	0.0431	ng/mL	0.0477
PFOA-13C_IS	Auto	4.538	5385542	5385542	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.538	5385542	5043770	26	5.1019	ng/mL	5.0000
PFOA	Auto	4.538	54388	5385542	9	0.0555	ng/mL	0.0500
PFOS_1	M	4.690	5065	612814	13	0.0577	ng/mL	0.0465
PFOS-13C_IS	Auto	4.692	612814	612814	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.692	612814	5043770	26	4.8430	ng/mL	5.0000
PFNA-13C_IS	Auto	4.707	5017964	5017964	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.707	5017964	5043770	26	5.5115	ng/mL	5.0000
PFNA	Auto	4.708	31841	5017964	11	0.0499	ng/mL	0.0500
PFDA-13C_IS	Auto	4.892	4574083	4574083	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.892	4574083	5043770	26	5.4225	ng/mL	5.0000
PFDA	M	4.892	40828	4574083	12	0.0528	ng/mL	0.0500
8_2-FTS-13C_IS	Auto	4.891	344260	344260	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.891	344260	5043770	26	5.4924	ng/mL	5.0000
8_2-FTS_1	M	4.890	2480	344260	15	0.0454	ng/mL	0.0480
PFDS_1	Auto	5.054	5324	612814	13	0.0504	ng/mL	0.0482
PFUnA	Auto	5.076	38839	4067971	14	0.0538	ng/mL	0.0500
PFUnA-13C_IS	Auto	5.075	4067971	4067971	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.075	4067971	5043770	26	4.9582	ng/mL	5.0000
PFDoA	Auto	5.255	29571	5837788	17	0.0495	ng/mL	0.0500
PFDoA-13C	Auto	5.254	5837788	5043770	26	5.2055	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.254	5837788	5837788	17	5.0000	ng/mL	5.0000
10_2-FtS_1	M	5.259	2292	344260	15	0.0456	ng/mL	0.0483
PFTrDA	Auto	5.426	37464	4568525	22	0.0506	ng/mL	0.0500
PFTeDA	Auto	5.576	45045	4568525	22	0.0506	ng/mL	0.0500
PFTeDA-13C	Auto	5.577	4568525	5043770	26	5.1717	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.577	4568525	4568525	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.226	1785546	1785546	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.226	1785546	5043770	26	5.0870	ng/mL	5.0000
FOSA	Auto	5.224	23481	1785546	18	0.0491	ng/mL	0.0500
N-MeFOSAA	Auto	5.005	4183	965176	19	0.0344	ng/mL	0.0500
N-MeFOSAA-d3	Auto	4.997	965176	5043770	26	5.1611	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.997	965176	965176	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.618	628923	628923	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.618	628923	5043770	26	5.0759	ng/mL	5.0000
N-MeFOSA	Auto	5.622	7734	628923	1	0.0481	ng/mL	0.0500
N-MeFOSE-d7	Auto	5.589	790470	5043770	26	5.2730	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.589	790470	790470	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.597	10568	790470	20	0.0486	ng/mL	0.0500

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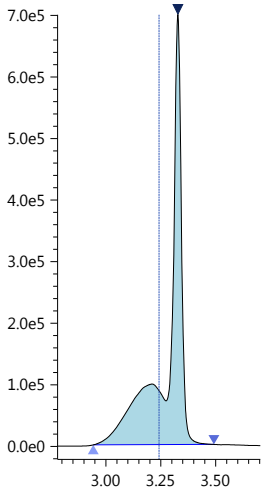
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.095	4125	920435	21	0.0565	ng/mL	0.0500
N-EtFOSAA-d5_IS	Auto	5.093	920435	920435	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.093	920435	5043770	26	5.1276	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.756	980690	980690	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.756	980690	5043770	26	5.0690	ng/mL	5.0000
N-EtFOSA	Auto	5.762	1286	980690	23	0.0410	ng/mL	0.0500
N-EtFOSE-d9_IS	Auto	5.721	828748	828748	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.721	828748	5043770	26	5.0150	ng/mL	5.0000
N-EtFOSE	M	5.733	8723	828748	24	0.0512	ng/mL	0.0500
13C7-PFUnDA_IS	Auto	5.074	5043770	5043770	26	5.0000	ng/mL	5.0000
PFPeS	M	4.200	4942	1013316	16	0.0522	ng/mL	0.0470
PFNS	M	4.871	4792	612814	13	0.0656	ng/mL	0.0481

PFBA-13C_IS
Conc 5.0000
RT 3.328 Area 2767602
ISTD 216.90>172.15 (-) 7.01e5



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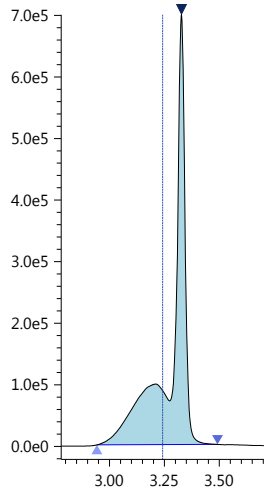
Q 216.90>172.15 (-) 7.01e5



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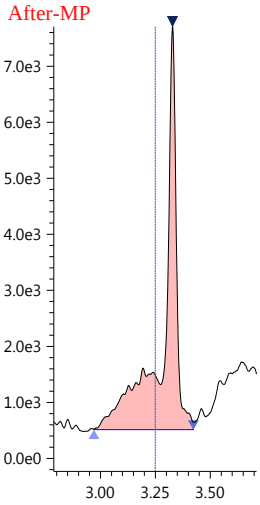
RT 3.328 Area 29201
Q 213.00>169.10 (-) 7.70e3



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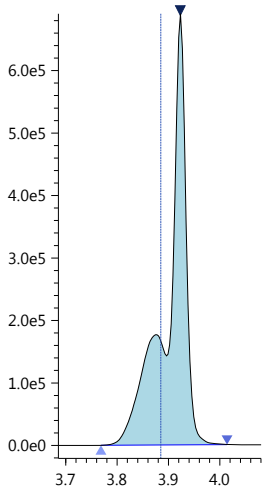
RT 3.923 Area 1720302
ISTD 267.90>223.00 (-) 6.91e5



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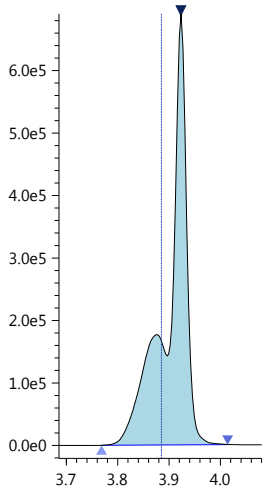

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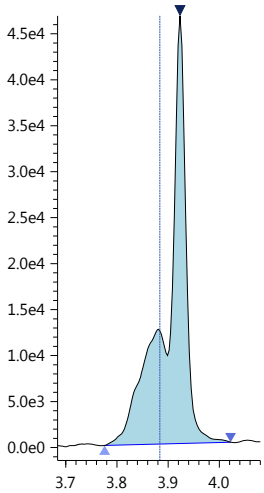
Q 263.05>219.10 (-) 4.70e4



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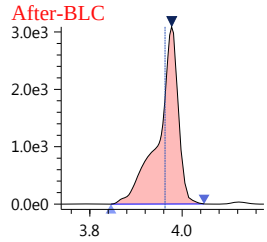
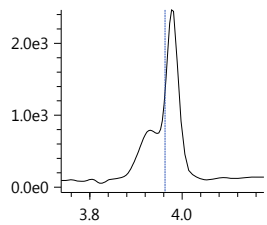
RT 3.977 Area 9220
R#1 77.28 (0.00)
Q 299.00>80.00 (-) 3.09e3



R1 298.80>99.00 (-) 2.47e3



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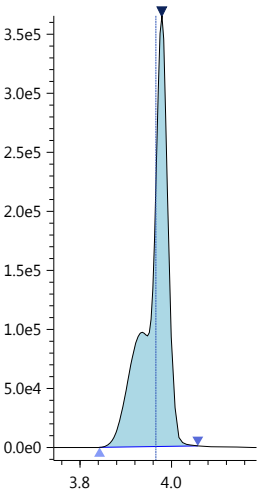
Conc 5.1110
RT 3.979 Area 1013316
Q 301.80>80.00 (-) 3.66e5



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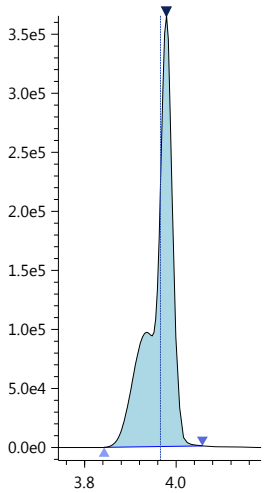
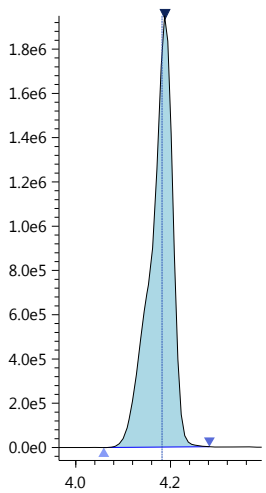
ISTD 301.80>80.00 (-) 3.66e5



PFHxA-13C_IS
Conc 5.0000
RT 4.188 Area 6118367
ISTD 314.90>270.10 (-) 1.95e6



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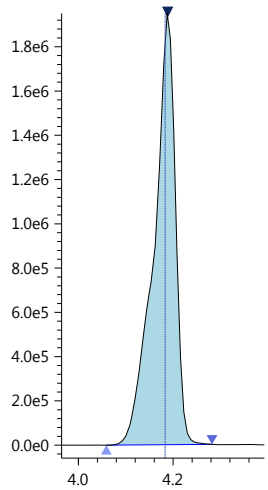
PFHxA-13C

Conc 5.4248
RT 4.188 Area 6118367

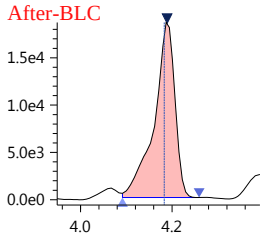
Q 314.90>270.10 (-) 1.95e6



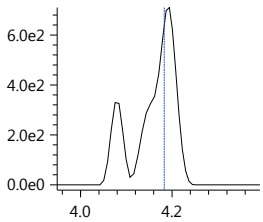
PFHxA

Conc 0.0531
RT 4.189 Area 58128
R#1 3.23 (0.00)

Q 313.00>269.00 (-) 1.87e4



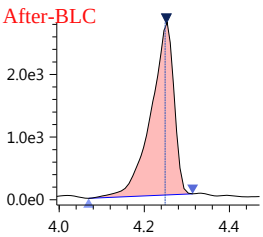
R1 313.00>119.10 (-) 7.10e2



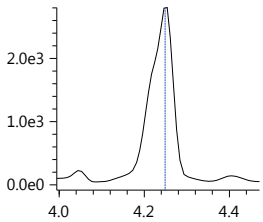
HPFO_DA

Conc 0.0464
RT 4.252 Area 10334
R#1 98.39 (0.00)

Q 329.00>169.00 (-) 2.83e3



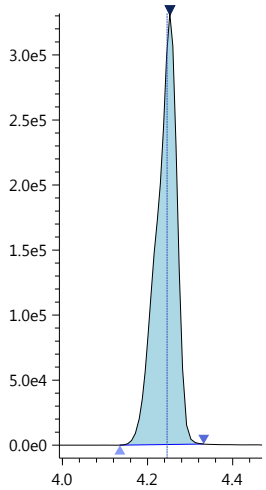
R1 329.00>285.10 (-) 2.81e3



HFPO_DA-13C_IS

Conc 5.0000
RT 4.253 Area 1096667

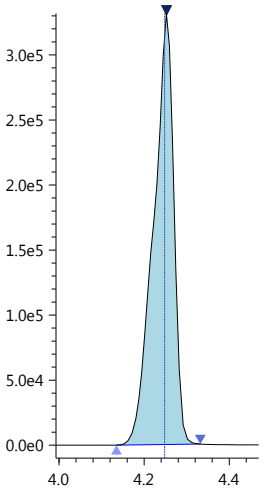
ISTD 332.00>286.80 (-) 3.32e5



HFPO_DA-13C

Conc 5.1818
RT 4.253 Area 1096667

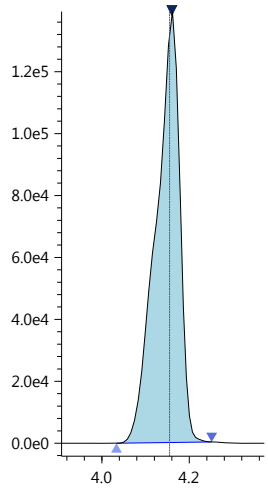
Q 332.00>286.80 (-) 3.32e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.160 Area 522631

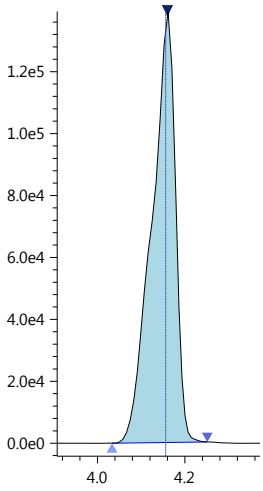
ISTD 328.80>309.05 (-) 1.39e5



4_2-FTS-13C

Conc 4.6246
RT 4.160 Area 522631

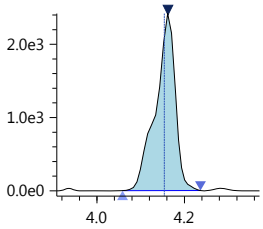
Q 328.80>309.05 (-) 1.39e5



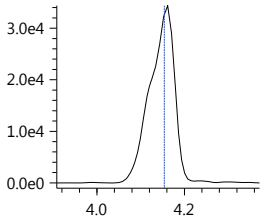
4_2-FTS_1

Conc 0.0748
RT 4.162 Area 7542
R#1 1418.50 (0.00)

Q 327.00>307.05 (-) 2.42e3



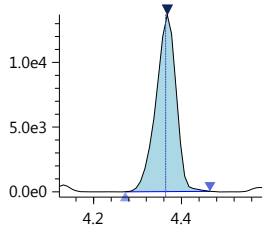
R1 327.00>81.10 (-) 3.44e4



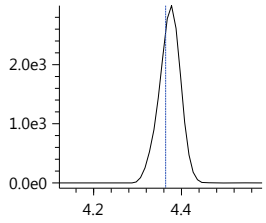
PFHpA

Conc 0.0510
RT 4.368 Area 43784
R#1 20.55 (0.00)

Q 362.90>319.00 (-) 1.37e4



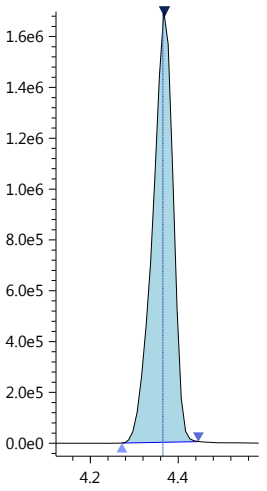
R1 362.90>169.00 (-) 3.00e3



PFHpA-13C_IS

Conc 5.0000
RT 4.369 Area 5532946

ISTD 366.90>322.10 (-) 1.70e6



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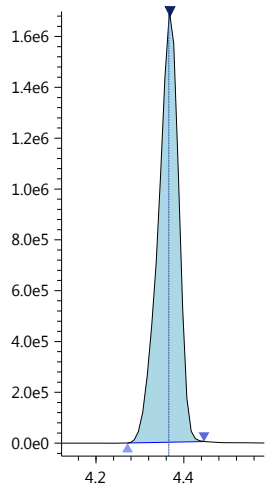
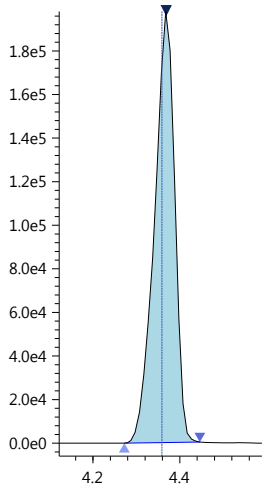
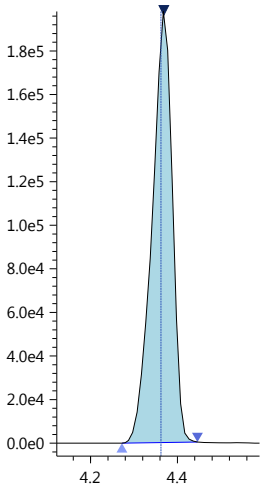
PFHpA-13C
Conc 5.9718
RT 4.369 Area 5532946
Q 366.90>322.10 (-) 1.70e6



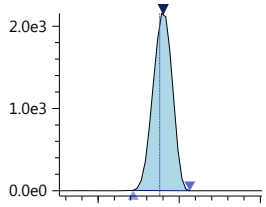
PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 642794
ISTD 402.70>84.05 (-) 1.98e5



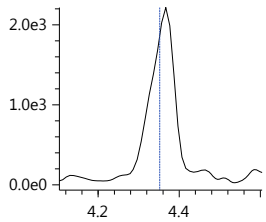
PFHxS-18O
Conc 5.7275
RT 4.369 Area 642794
Q 402.70>84.05 (-) 1.98e5



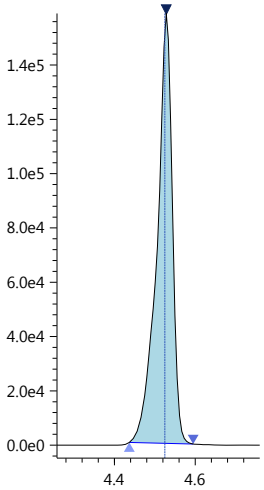
PFHxS_1
Conc 0.0575
RT 4.361 Area 7342
R#1 87.12 (0.00)
Q 399.00>80.00 (-) 2.16e3



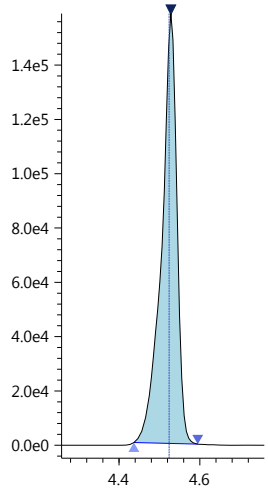
R1 399.00>99.00 (-) 2.22e3



6_2-FTS-13C
Conc 5.2237
RT 4.529 Area 415303
Q 428.90>409.00 (-) 1.59e5

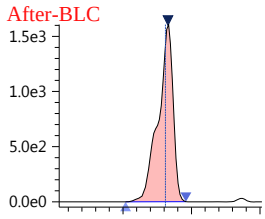


6_2-FTS-13C_IS
Conc 5.0000
RT 4.529 Area 415303
ISTD 428.90>409.00 (-) 1.59e5

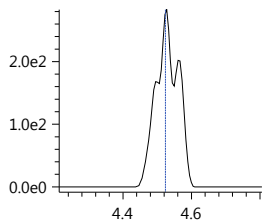


6_2-FTS_1
Conc 0.0586
RT 4.532 Area 4818
R#1 15.97 (0.00)
Q 427.00>407.00 (-) 1.61e3

After-BLC

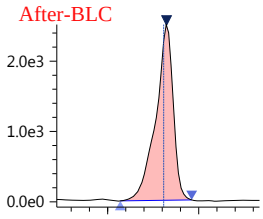


R1 427.00>80.90 (-) 2.83e2

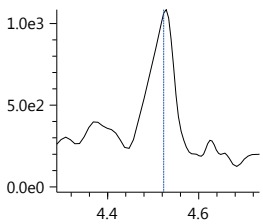


PFHpS_1
Conc 0.0431
RT 4.530 Area 6631
R#1 33.11 (0.00)
Q 449.00>80.15 (-) 2.52e3

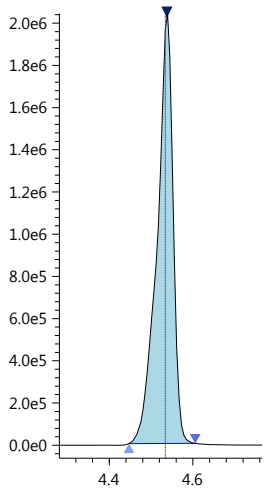
After-BLC



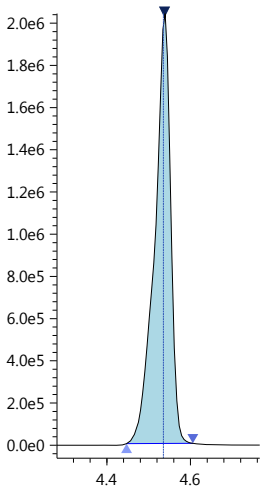
R1 449.00>99.20 (-) 1.09e3



PFOA-13C_IS
Conc 5.0000
RT 4.538 Area 5385542
ISTD 416.80>372.05 (-) 2.05e6



PFOA-13C
Conc 5.1019
RT 4.538 Area 5385542
Q 416.80>372.05 (-) 2.05e6



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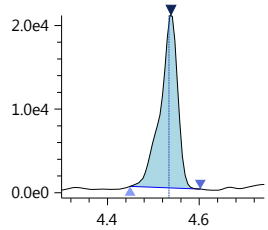
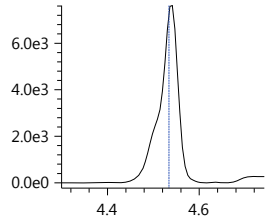
PFOA
Conc 0.0555
RT 4.538 Area 54388
R#1 37.10 (0.00)
Q 413.00>369.00 (-) 2.12e4

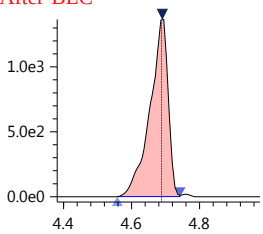


R1 413.00>169.10 (-) 7.62e3

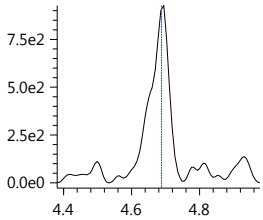


PFOS_1
Conc 0.0577
RT 4.690 Area 5065
R#1 64.86 (0.00)
Q 499.00>80.00 (-) 1.37e3

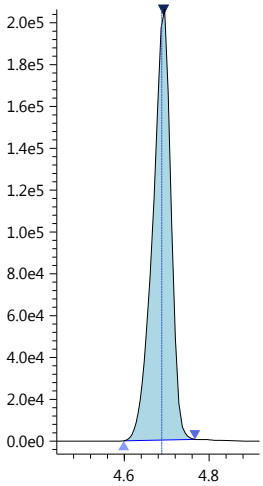
After-BLC



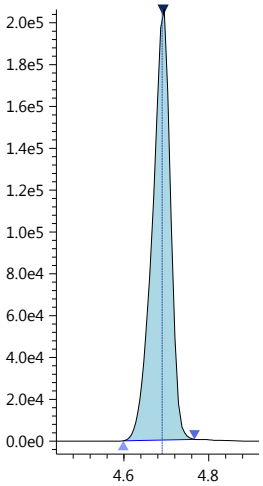
R1 499.00>99.00 (-) 9.27e2



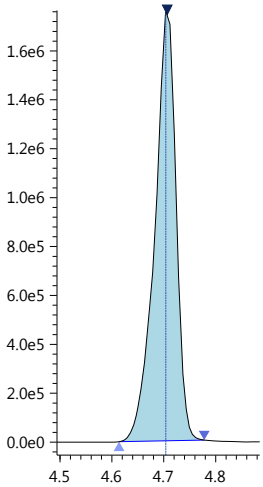
PFOS-13C_IS
Conc 5.0000
RT 4.692 Area 612814
ISTD 502.80>80.05 (-) 2.06e5



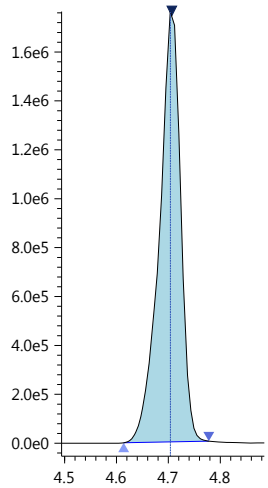
PFOS-13C
Conc 4.8430
RT 4.692 Area 612814
Q 502.80>80.05 (-) 2.06e5



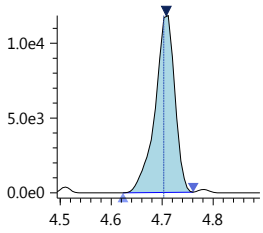
PFNA-13C_IS
Conc 5.0000
RT 4.707 Area 5017964
ISTD 467.80>423.00 (-) 1.77e6



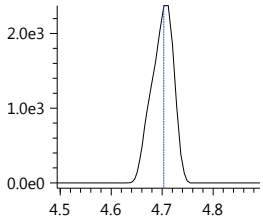
PFNA-13C
Conc 5.5115
RT 4.707 Area 5017964
Q 467.80>423.00 (-) 1.77e6



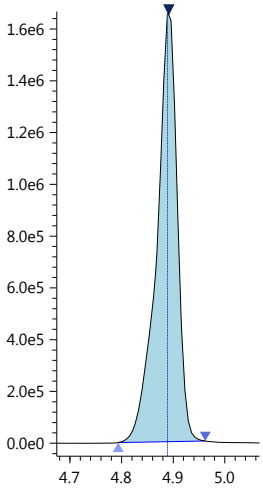
PFNA
Conc 0.0499
RT 4.708 Area 31841
R#1 20.18 (0.00)
Q 463.00>418.90 (-) 1.19e4



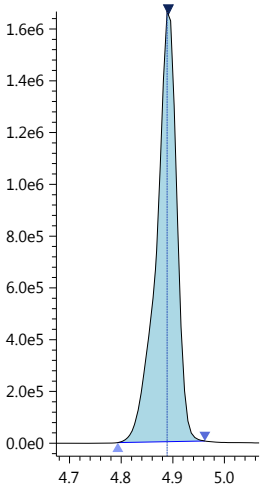
R1 463.00>219.00 (-) 2.37e3



PFDA-13C_IS
Conc 5.0000
RT 4.892 Area 4574083
ISTD 514.80>469.95 (-) 1.67e6

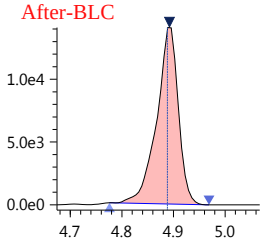


PFDA-13C
Conc 5.4225
RT 4.892 Area 4574083
Q 514.80>469.95 (-) 1.67e6

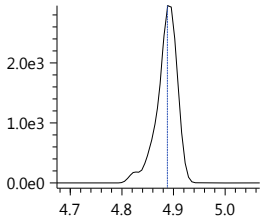


PFDA
Conc 0.0528
RT 4.892 Area 40828
R#1 20.93 (0.00)
Q 513.00>468.80 (-) 1.41e4

After-BLC



R1 513.00>219.10 (-) 2.96e3



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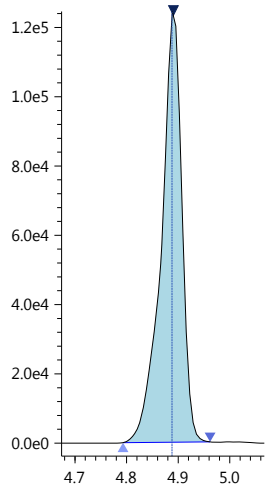
8_2-FTS-13C_IS

Conc 5.0000
RT 4.891 Area 344260

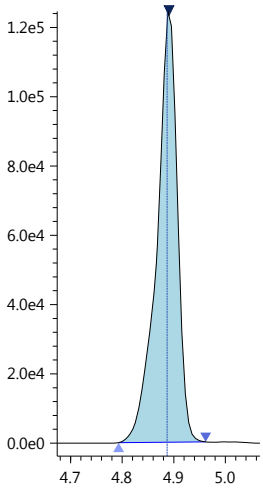
ISTD 528.80>509.00 (-) 1.25e5



8_2-FTS-13C

Conc 5.4924
RT 4.891 Area 344260

Q 528.80>509.00 (-) 1.25e5

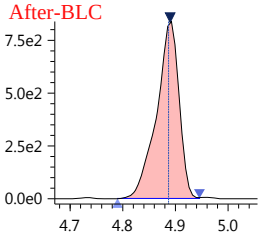


8_2-FTS_1

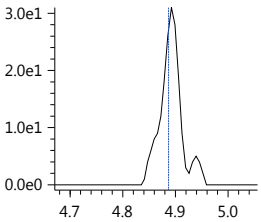
Conc 0.0454
RT 4.890 Area 2480
R#1 2.88 (0.00)

Q 527.10>506.90 (-) 8.39e2

After-BLC



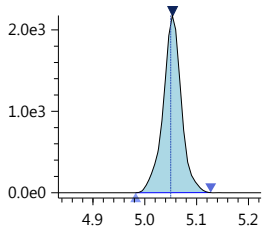
R1 527.20>487.00 (-) 3.10e1



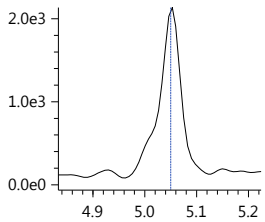
PFDS_1

Conc 0.0504
RT 5.054 Area 5324
R#1 89.89 (0.00)

Q 599.00>79.90 (-) 2.18e3



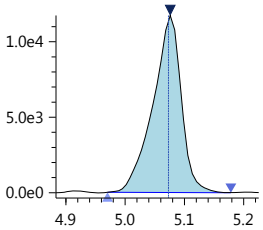
R1 599.00>99.10 (-) 2.14e3



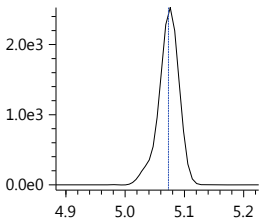
PFUnA

Conc 0.0538
RT 5.076 Area 38839
R#1 21.79 (0.00)

Q 563.00>518.90 (-) 1.17e4



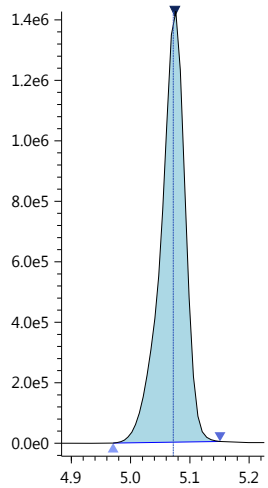
R1 563.00>219.00 (-) 2.53e3



PFUnA-13C_IS

Conc 5.0000
RT 5.075 Area 4067971

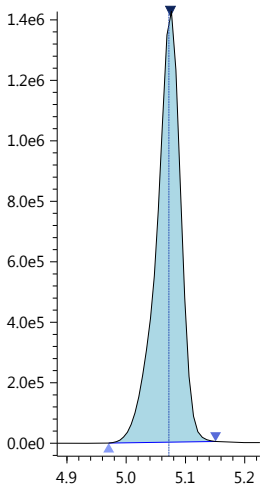
ISTD 564.80>519.95 (-) 1.43e6



PFUnA-13C

Conc 4.9582
RT 5.075 Area 4067971

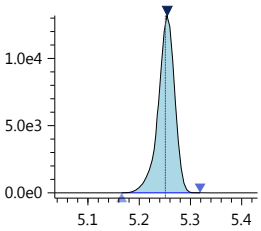
Q 564.80>519.95 (-) 1.43e6



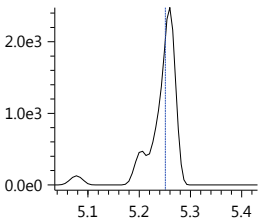
PFDoA

Conc 0.0495
RT 5.255 Area 29571
R#1 17.24 (0.00)

Q 613.05>569.00 (-) 1.32e4



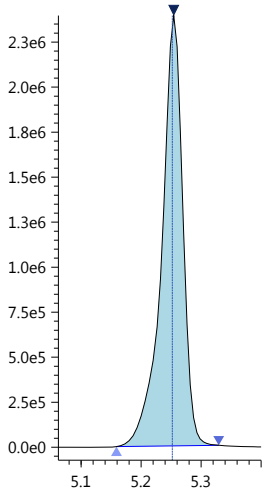
R1 613.05>169.00 (-) 2.48e3



PFDoA-13C

Conc 5.2055
RT 5.254 Area 5837788

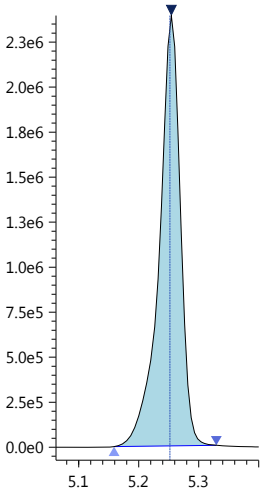
Q 614.80>569.95 (-) 2.40e6



PFDoA-13C_IS

Conc 5.0000
RT 5.254 Area 5837788

ISTD 614.80>569.95 (-) 2.40e6



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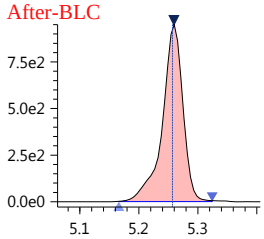
10_2-FtS_1

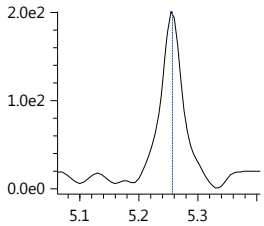
Conc 0.0456
RT 5.259 Area 2292
R#1 19.82 (0.00)

Q 627.00>606.95 (-) 9.51e2

After-BLC



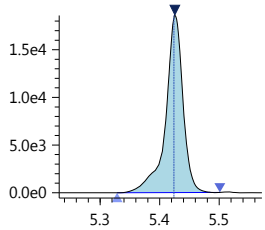
R1 627.00>81.25 (-) 2.01e2



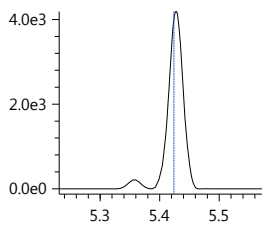
PFTrDA

Conc 0.0506
RT 5.426 Area 37464
R#1 22.71 (0.00)

Q 663.00>618.90 (-) 1.86e4



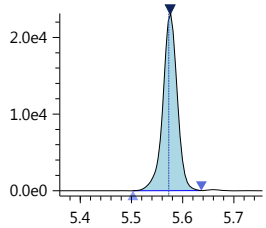
R1 662.90>169.00 (-) 4.19e3



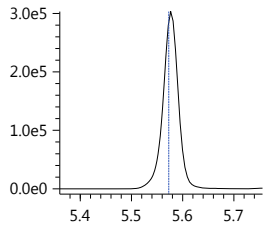
PFTeDA

Conc 0.0506
RT 5.576 Area 45045
R#1 1230.09 (0.00)

Q 713.40>669.00 (-) 2.31e4



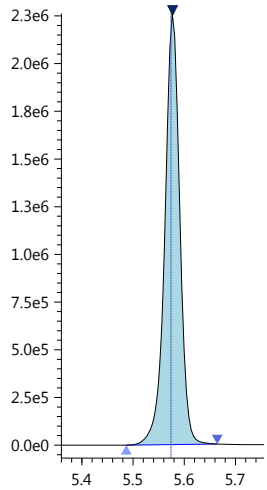
R1 713.40>169.10 (-) 3.03e5



PFTeDA-13C

Conc 5.1717
RT 5.577 Area 4568525

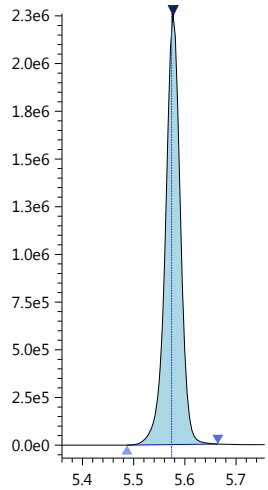
Q 714.70>669.90 (-) 2.26e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.577 Area 4568525

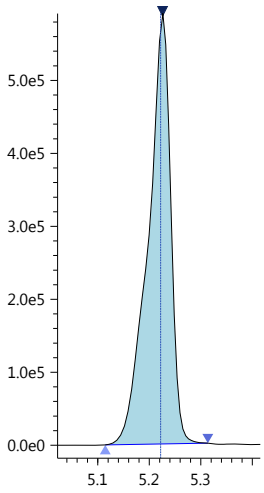
ISTD 714.70>669.90 (-) 2.26e6



FOSA-13C_IS

Conc 5.0000
RT 5.226 Area 1785546

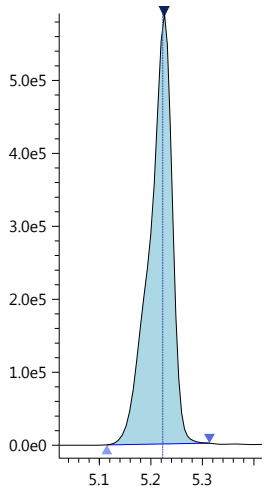
ISTD 506.00>78.05 (-) 5.92e5



FOSA-13C

Conc 5.0870
RT 5.226 Area 1785546

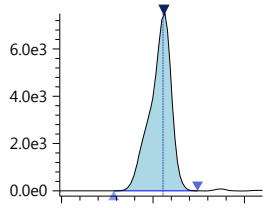
Q 506.00>78.05 (-) 5.92e5



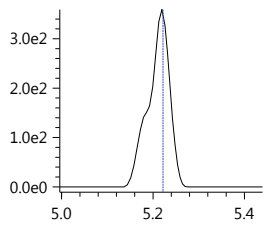
FOSA

Conc 0.0491
RT 5.224 Area 23481
R#1 5.00 (0.00)

Q 498.20>78.00 (-) 7.50e3



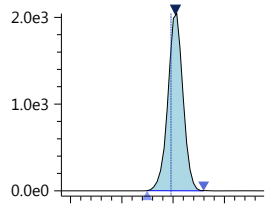
R1 498.20>64.10 (-) 3.59e2



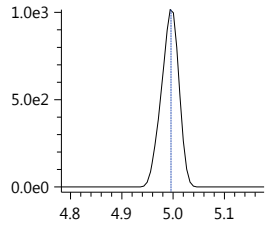
N-MeFOSAA

Conc 0.0344
RT 5.005 Area 4183
R#1 38.36 (0.00)

Q 570.20>419.00 (-) 2.04e3



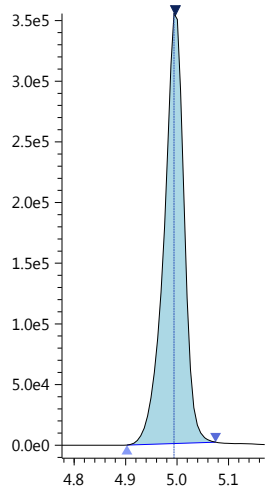
R1 570.20>512.00 (-) 1.02e3



N-MeFOSAA-d3

Conc 5.1611
RT 4.997 Area 965176

Q 572.80>419.05 (-) 3.56e5



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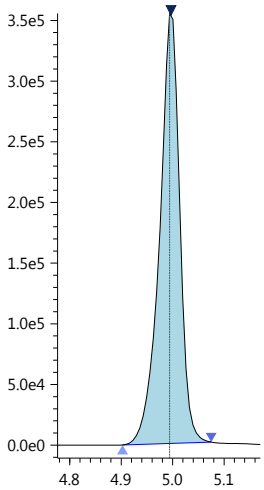
N-MeFOSAA-d3_IS

Conc 5.0000
RT 4.997 Area 965176

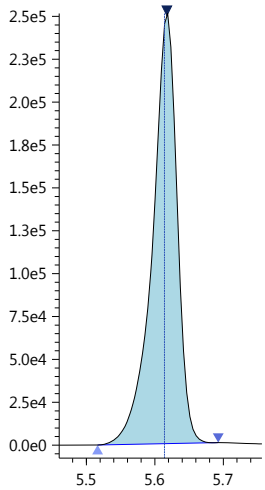
ISTD 572.80>419.05 (-) 3.56e5



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.618 Area 628923

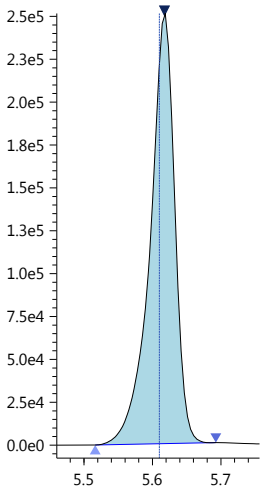
ISTD 514.90>168.90 (-) 2.52e5



N-MeFOSA-d3

Conc 5.0759
RT 5.618 Area 628923

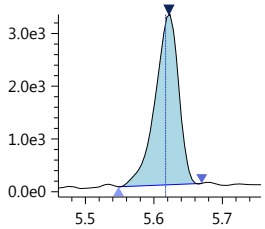
Q 514.90>168.90 (-) 2.52e5



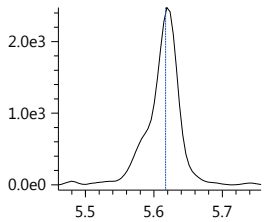
N-MeFOSA

Conc 0.0481
RT 5.622 Area 7734
R#1 77.25 (0.00)

Q 512.00>169.10 (-) 3.36e3



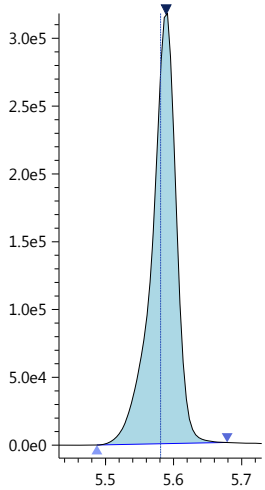
R1 512.00>219.00 (-) 2.48e3



N-MeFOSE-d7

Conc 5.2730
RT 5.589 Area 790470

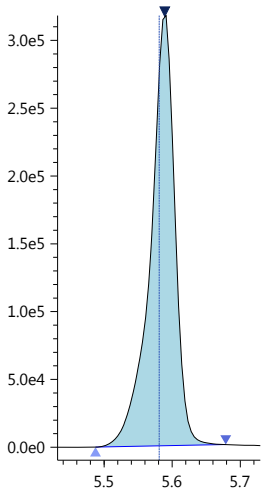
Q 622.70>59.10 (-) 3.18e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.589 Area 790470

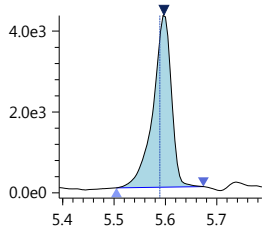
ISTD 622.70>59.10 (-) 3.18e5



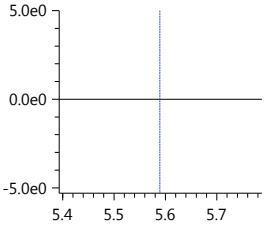
N-MeFOSE

Conc 0.0486
RT 5.597 Area 10568
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 4.39e3



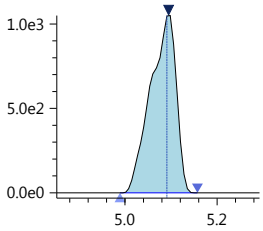
R1 556.00>121.20 (-) 0.00e0



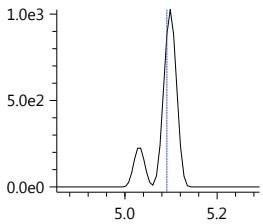
N-EtFOSAA

Conc 0.0565
RT 5.095 Area 4125
R#1 84.19 (0.00)

Q 584.20>418.95 (-) 1.05e3



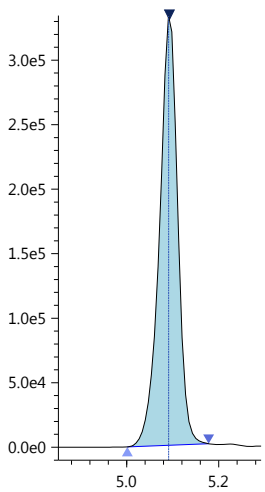
R1 584.20>526.10 (-) 1.03e3



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.093 Area 920435

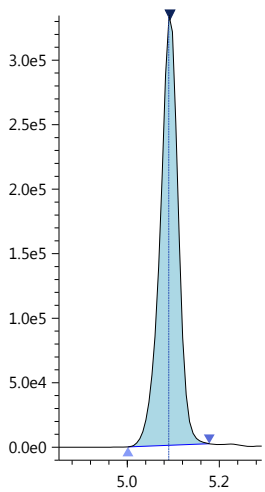
ISTD 588.80>419.00 (-) 3.35e5



N-EtFOSAA-d5

Conc 5.1276
RT 5.093 Area 920435

Q 588.80>419.00 (-) 3.35e5



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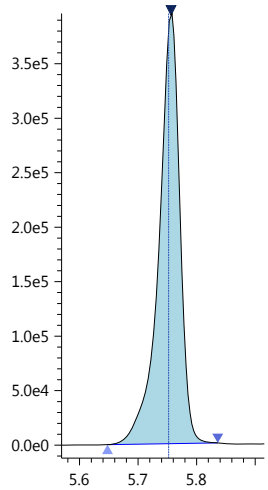
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.756 Area 980690

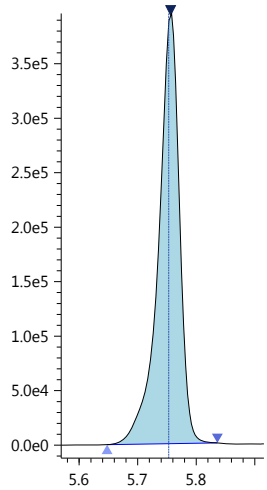
ISTD 530.90>169.15 (-) 3.96e5



N-EtFOSA-d9

Conc 5.0690
RT 5.756 Area 980690

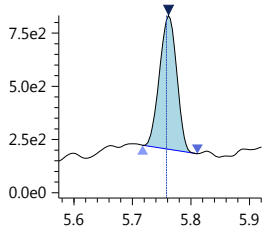
Q 530.90>169.15 (-) 3.96e5



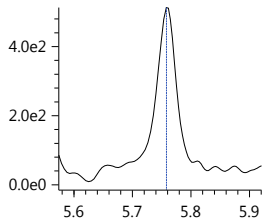
N-EtFOSA

Conc 0.0410
RT 5.762 Area 1286
R#1 68.54 (0.00)

Q 526.90>169.10 (-) 8.33e2



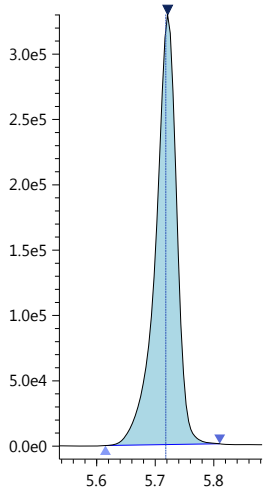
R1 526.90>219.00 (-) 5.13e2



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.721 Area 828748

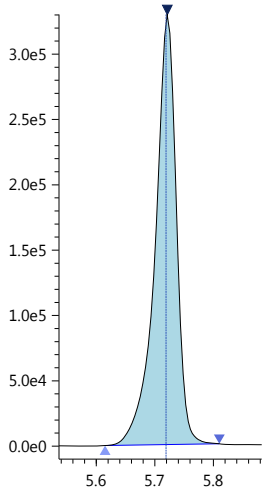
ISTD 638.70>59.10 (-) 3.30e5



N-EtFOSE-d9

Conc 5.0150
RT 5.721 Area 828748

Q 638.70>59.10 (-) 3.30e5

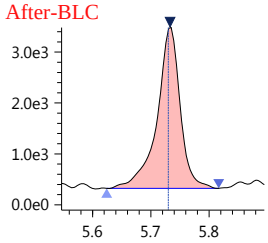


N-EtFOSE

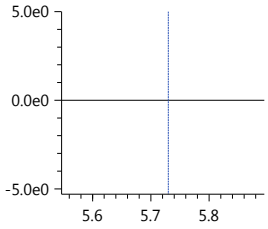
Conc 0.0512
RT 5.733 Area 8723
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 3.48e3

After-BLC



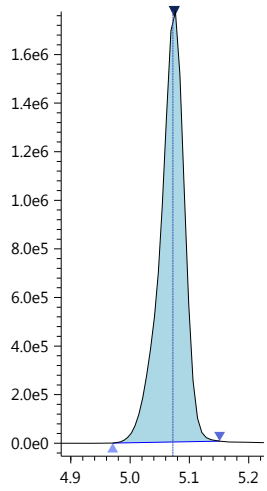
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.074 Area 5043770

ISTD 570.00>525.00 (-) 1.78e6

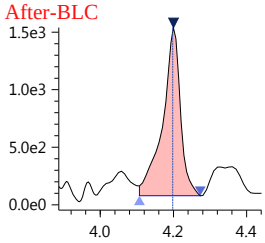


PFPeS

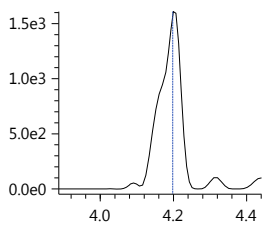
Conc 0.0522
RT 4.200 Area 4942
R#1 110.43 (0.00)

Q 349.00>99.00 (-) 1.54e3

After-BLC



R1 349.00>79.95 (-) 1.61e3

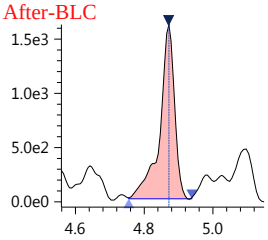


PFNS

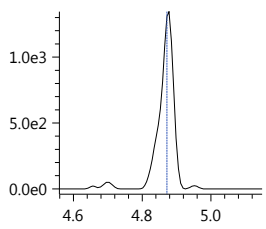
Conc 0.0656
RT 4.871 Area 4792
R#1 81.30 (0.00)

Q 549.00>99.00 (-) 1.63e3

After-BLC



R1 549.00>79.95 (-) 1.35e3



Insight Report

Printed at 1/21/2019 9:31:25 AM

190118_023

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Date acquired: 1/18/2019 5:47:18 PM
Acquired by: System Administrator
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Conc 5.0000
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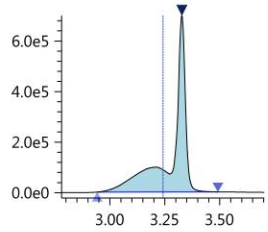
ISTD 216.90>172.15 (-) 7.01e5



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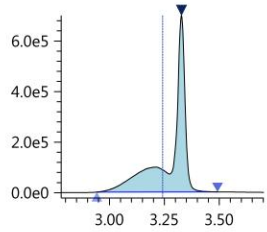
Q 216.90>172.15 (-) 7.01e5



PFBA
Conc ----
RT ---- Area ----
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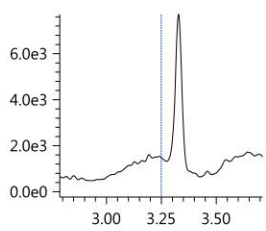

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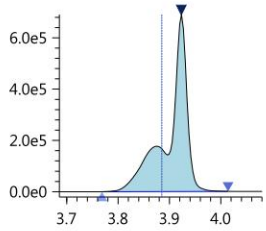
ISTD 267.90>223.00 (-) 6.91e5



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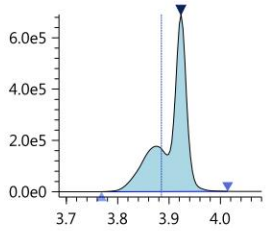

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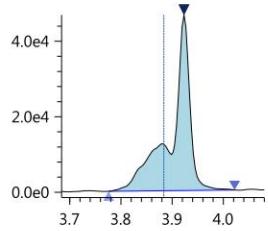
Q 263.05>219.10 (-) 4.70e4



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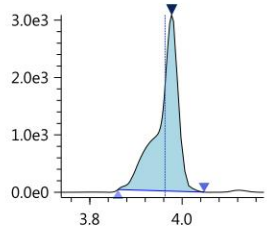
Q 299.00>80.00 (-) 3.09e3



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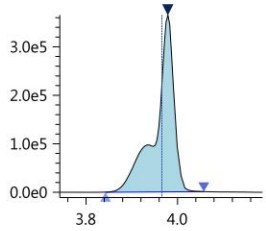
Q 301.80>80.00 (-) 3.66e5



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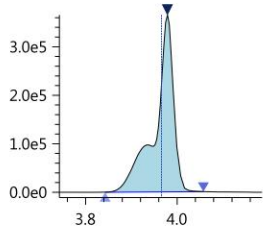

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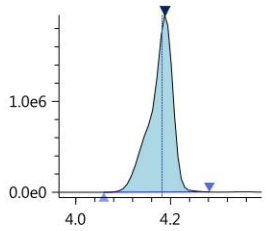
ISTD 314.90>270.10 (-) 1.95e6



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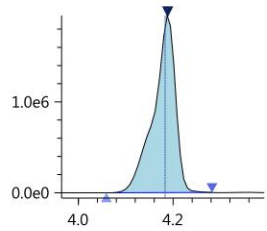

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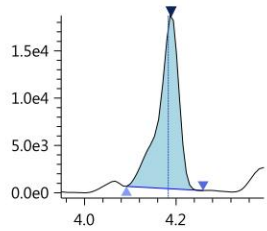

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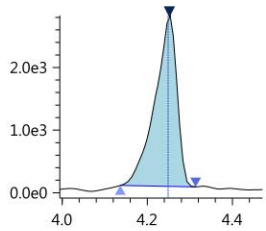
RT 4.252 Area 9810
Q 329.00>169.00 (-) 2.83e3



HFPO_DA-13C_IS
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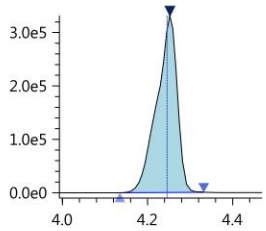
RT 4.253 Area 1096667
ISTD 332.00>286.80 (-) 3.32e5



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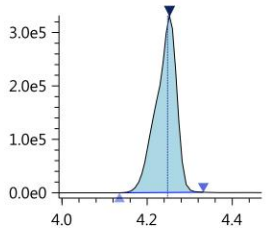

4_2-FTS-13C_IS
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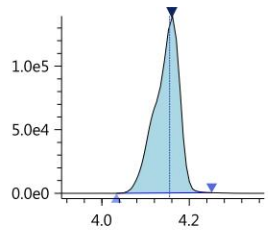
ISTD 328.80>309.05 (-) 1.39e5



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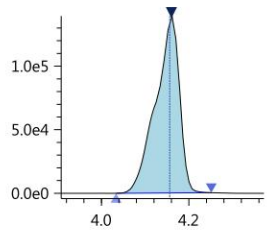

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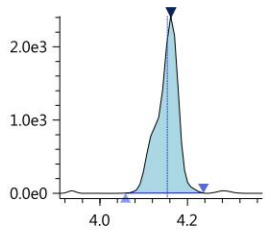

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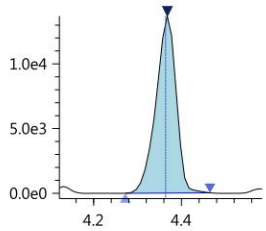

PFHpA-13C_IS
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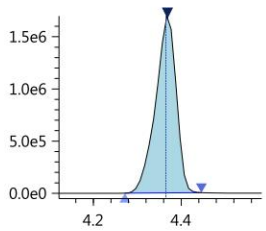

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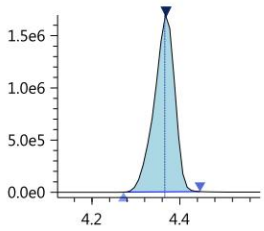

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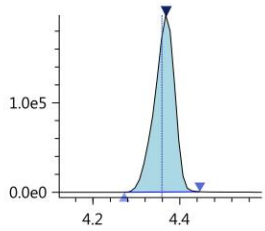

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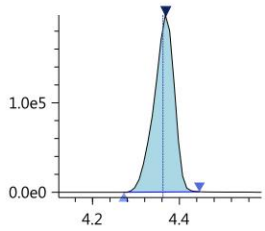

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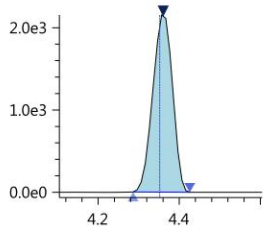

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Conc 5.2237
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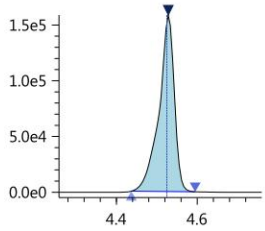
Q 428.90>409.00 (-) 1.59e5



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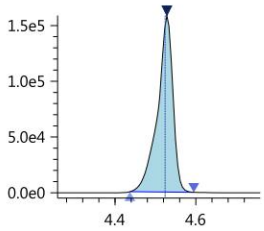
ISTD 428.90>409.00 (-) 1.59e5



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RT 4.532 Area 2745
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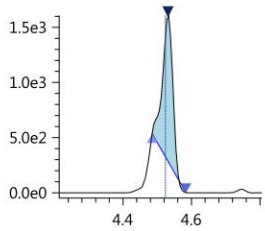

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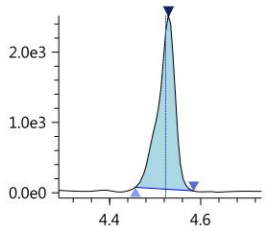
Q 449.00>80.15 (-) 2.52e3



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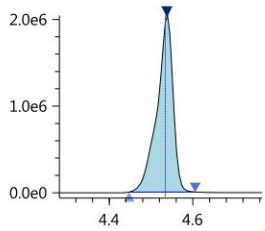

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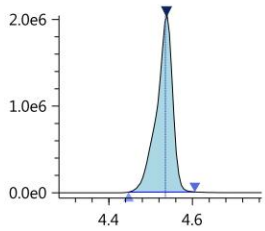

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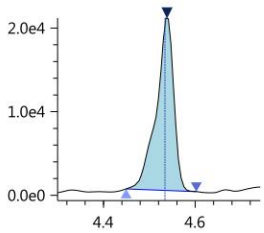

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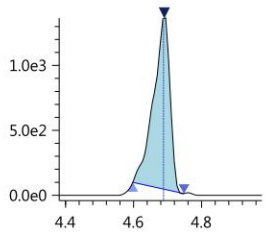
Q 499.00>80.00 (-) 1.37e3



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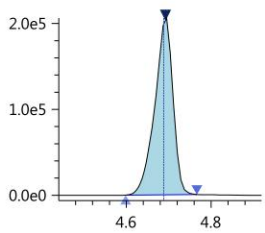
ISTD 502.80>80.05 (-) 2.06e5



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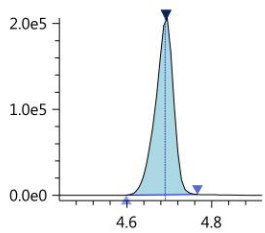

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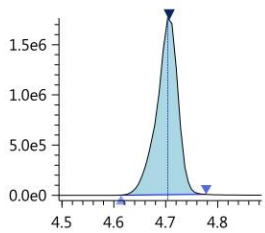
ISTD 467.80>423.00 (-) 1.77e6



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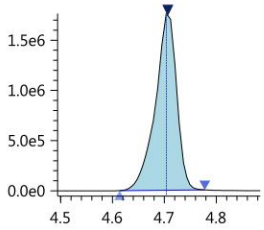

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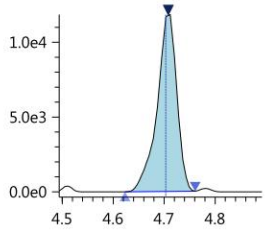
Conc 0.0097
RT 4.708 Area 31841
Q 463.00>418.90 (-) 1.19e4



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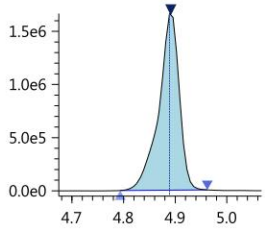
ISTD 514.80>469.95 (-) 1.67e6



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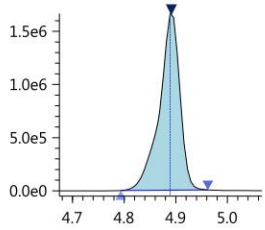

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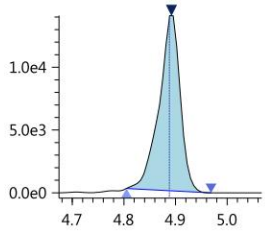

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8_2-FTS-13C_IS
Conc 5.0000
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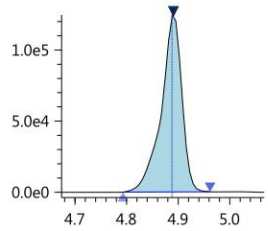
ISTD 528.80>509.00 (-) 1.25e5



8_2-FTS-13C
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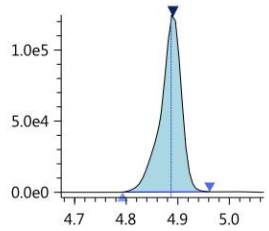
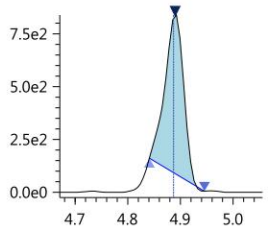
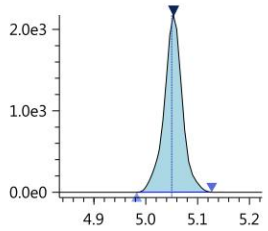
Q 528.80>509.00 (-) 1.25e5



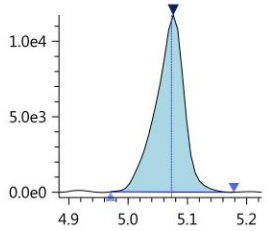
8_2-FTS_1
Conc 0.0077
RT 4.890 Area 1850
Q 527.10>506.90 (-) 8.39e2



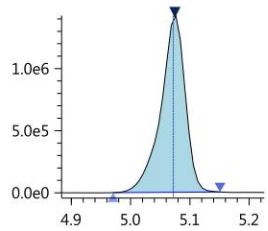
PFDS_1
Conc 0.0108
RT 5.054 Area 5324
Q 599.00>79.90 (-) 2.18e3



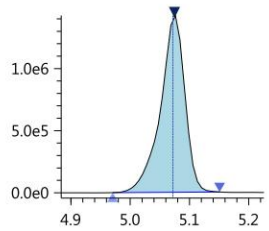
PFUnA
Conc 0.0130
RT 5.076 Area 38839
Q 563.00>518.90 (-) 1.17e4



PFUnA-13C_IS
Conc 5.0000
RT 5.075 Area 4067971
ISTD 564.80>519.95 (-) 1.43e6



PFUnA-13C
Conc 4.9582
RT 5.075 Area 4067971
Q 564.80>519.95 (-) 1.43e6



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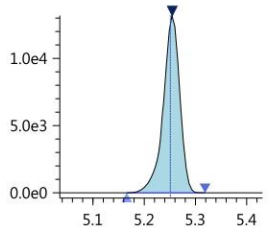
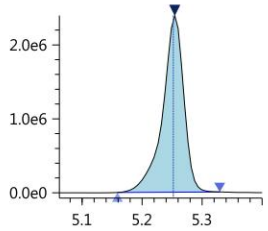
Conc 0.0103
RT 5.255 Area 29571
Q 613.05>569.00 (-) 1.32e4



PFDoA-13C
Conc 5.2055
RT 5.254 Area 5837788
Q 614.80>569.95 (-) 2.40e6



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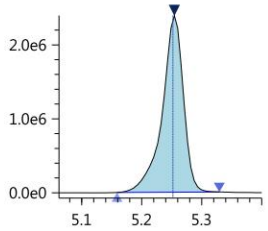

10_2-FtS_1
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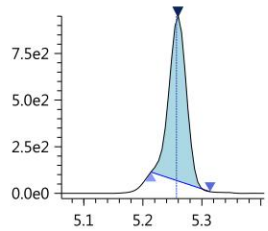
RT 5.259 Area 1823
Q 627.00>606.95 (-) 9.51e2



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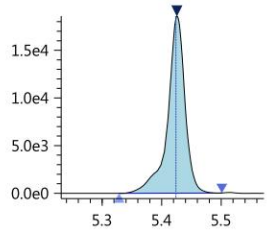
Conc 0.0104
RT 5.426 Area 37464
Q 663.00>618.90 (-) 1.86e4



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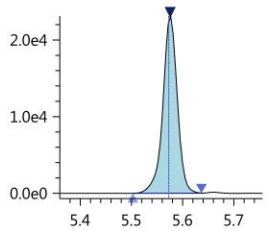
Conc 0.0314
RT 5.576 Area 45045
Q 713.40>669.00 (-) 2.31e4



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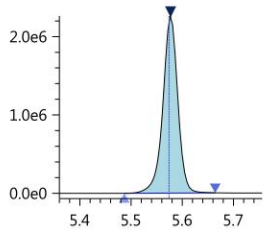
Conc 5.1717
RT 5.577 Area 4568525
Q 714.70>669.90 (-) 2.26e6



PFTeDA-13C_IS
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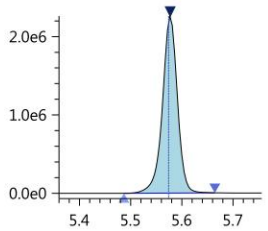
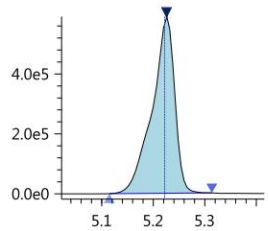
RT 5.577 Area 4568525
ISTD 714.70>669.90 (-) 2.26e6



FOSA-13C_IS
Conc 5.0000
RT 5.226 Area 1785546
ISTD 506.00>78.05 (-) 5.92e5



FOSA-13C
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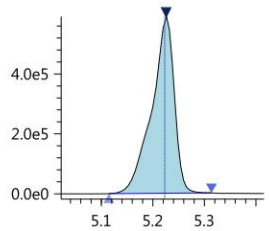

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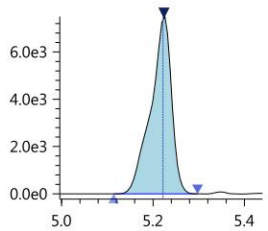
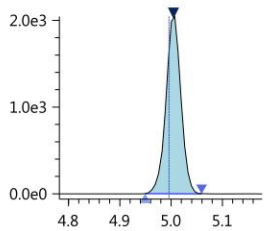
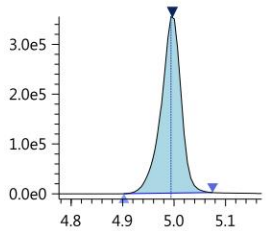
Q 498.20>78.00 (-) 7.50e3



N-MeFOSAA
Conc 0.0079
RT 5.005 Area 4183
Q 570.20>419.00 (-) 2.04e3



N-MeFOSAA-d3
Conc 5.1611
RT 4.997 Area 965176
Q 572.80>419.05 (-) 3.56e5



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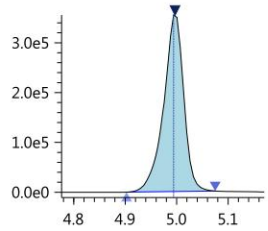
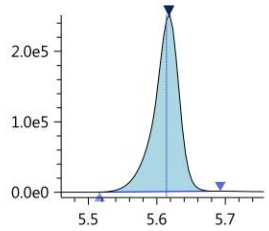
Printed at 1/21/2019 9:31:25 AM

N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.997 Area 965176
ISTD 572.80>419.05 (-) 3.56e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.618 Area 628923
ISTD 514.90>168.90 (-) 2.52e5



N-MeFOSA-d3
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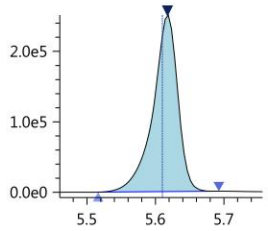

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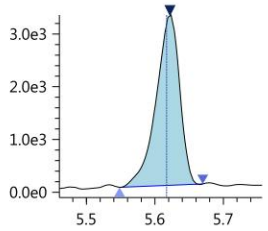
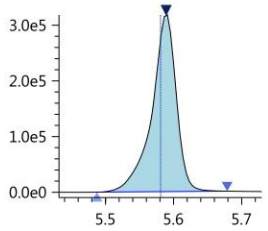


N-MeFOSE-d7
Conc 5.2730
RT 5.589 Area 790470
Q 622.70>59.10 (-) 3.18e5



N-MeFOSE-d7_IS
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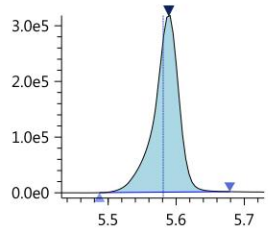
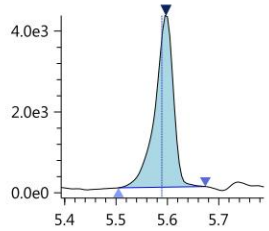
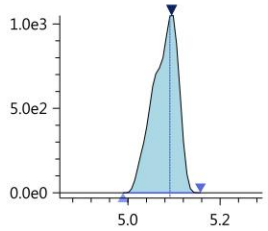
ISTD 622.70>59.10 (-) 3.18e5



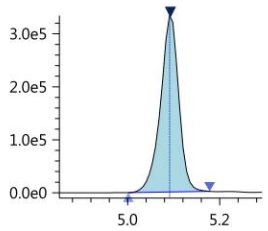
N-MeFOSE
Conc 0.0105
RT 5.597 Area 10568
Q 616.00>59.00 (-) 4.39e3



N-EtFOSAA
Conc 0.0096
RT 5.095 Area 4125
Q 584.20>418.95 (-) 1.05e3



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.093 Area 920435
ISTD 588.80>419.00 (-) 3.35e5



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Conc 5.1276
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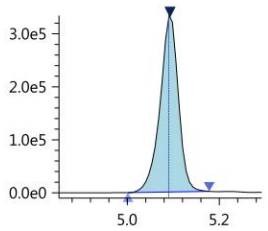
Q 588.80>419.00 (-) 3.35e5



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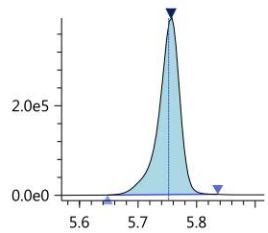
Conc 5.0000
RT 5.756 Area 980690
ISTD 530.90>169.15 (-) 3.96e5



N-EtFOSA-d9
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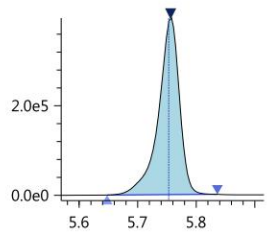
Q 530.90>169.15 (-) 3.96e5



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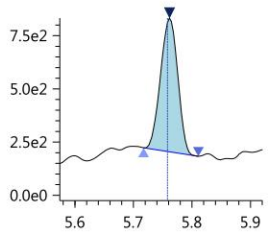
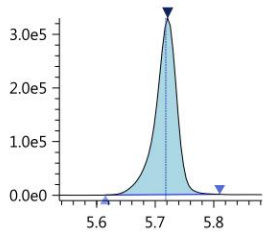
Conc 0.0088
RT 5.762 Area 1286
Q 526.90>169.10 (-) 8.33e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.721 Area 828748
ISTD 638.70>59.10 (-) 3.30e5



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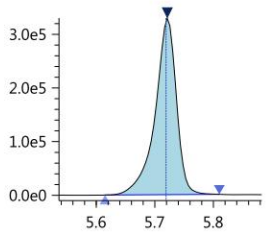
Q 638.70>59.10 (-) 3.30e5



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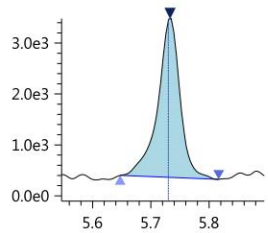
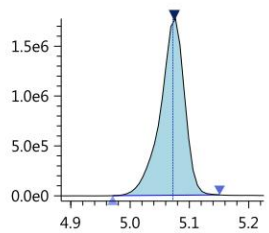
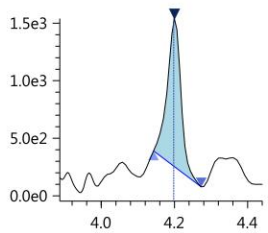
Q 630.00>58.90 (-) 3.48e3



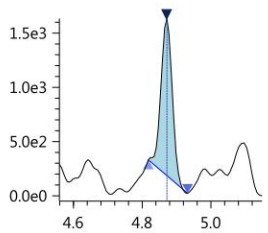
13C7-PFUnDA_IS
Conc 5.0000
RT 5.074 Area 5043770
ISTD 570.00>525.00 (-) 1.78e6



PFPeS
Conc 0.0080
RT 4.200 Area 3333
Q 349.00>99.00 (-) 1.54e3



PFNS
Conc 0.0100
RT 4.871 Area 3286
Q 549.00>99.00 (-) 1.63e3



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_024

Sample ID: 0.10 PPB ICAL
Date acquired: 1/18/2019 5:57:44 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_024.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.330	2797168	2797168	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.330	2797168	5463388	26	4.7432	ng/mL	5.0000
PFBA	M	3.331	53246	2797168	2	0.0957	ng/mL	0.1000
PFPeA-13C_IS	Auto	3.925	1735400	1735400	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.925	1735400	5463388	26	4.8331	ng/mL	5.0000
PFPeA	Auto	3.925	174273	1735400	4	0.1103	ng/mL	0.1000
PFBS_1	Auto	3.980	18604	1031492	16	0.0896	ng/mL	0.0887
PFBS-13C	Auto	3.981	1031492	5463388	26	4.8031	ng/mL	5.0000
PFBS-13C_IS	Auto	3.981	1031492	1031492	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.190	6011202	6011202	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.190	6011202	5463388	26	4.9204	ng/mL	5.0000
PFHxA	Auto	4.189	117021	6011202	6	0.1069	ng/mL	0.1000
HPFO_DA	Auto	4.255	22451	1125689	3	0.0983	ng/mL	0.1000
HFPO_DA-13C_IS	Auto	4.255	1125689	1125689	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.255	1125689	5463388	26	4.9104	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.163	590381	590381	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.163	590381	5463388	26	4.8228	ng/mL	5.0000
4_2-FTS_1	Auto	4.163	10763	590381	5	0.0945	ng/mL	0.0937
PFHpA	Auto	4.368	78252	4753285	8	0.0965	ng/mL	0.1000
PFHpA-13C_IS	Auto	4.369	4753285	4753285	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.369	4753285	5463388	26	4.7363	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.370	655833	655833	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.370	655833	5463388	26	5.3949	ng/mL	5.0000
PFHxS_1	Auto	4.370	10182	655833	7	0.0781	ng/mL	0.0913
6_2-FTS-13C	Auto	4.532	414328	5463388	26	4.8112	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.532	414328	414328	10	5.0000	ng/mL	5.0000
6_2-FTS_1	M	4.532	7134	414328	10	0.0870	ng/mL	0.0951
PFHpS_1	Auto	4.533	12884	655833	7	0.0821	ng/mL	0.0953
PFOA-13C_IS	Auto	4.542	5746274	5746274	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.542	5746274	5463388	26	5.0255	ng/mL	5.0000
PFOA	Auto	4.542	97968	5746274	9	0.0965	ng/mL	0.1000
PFOS_1	M	4.691	6956	671691	13	0.0723	ng/mL	0.0929
PFOS-13C_IS	Auto	4.697	671691	671691	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.697	671691	5463388	26	4.9006	ng/mL	5.0000
PFNA-13C_IS	Auto	4.711	4566291	4566291	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.711	4566291	5463388	26	4.6302	ng/mL	5.0000
PFNA	Auto	4.713	62099	4566291	11	0.1011	ng/mL	0.1000
PFDA-13C_IS	Auto	4.896	4386078	4386078	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.896	4386078	5463388	26	4.8002	ng/mL	5.0000
PFDA	Auto	4.895	76768	4386078	12	0.1036	ng/mL	0.1000
8_2-FTS-13C_IS	Auto	4.894	324159	324159	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.894	324159	5463388	26	4.7745	ng/mL	5.0000
8_2-FTS_1	Auto	4.894	4929	324159	15	0.0958	ng/mL	0.0960
PFDS_1	Auto	5.053	9665	671691	13	0.0834	ng/mL	0.0965
PFUnA	Auto	5.079	77717	4461105	14	0.1025	ng/mL	0.1000
PFUnA-13C_IS	Auto	5.079	4461105	4461105	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.079	4461105	5463388	26	5.0197	ng/mL	5.0000
PFDoA	Auto	5.259	64278	5960677	17	0.1023	ng/mL	0.1000
PFDoA-13C	Auto	5.259	5960677	5463388	26	4.9069	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.259	5960677	5960677	17	5.0000	ng/mL	5.0000
10_2-FtS_1	M	5.264	4564	324159	15	0.0963	ng/mL	0.0966
PFTrDA	Auto	5.430	77536	4745099	22	0.0975	ng/mL	0.1000
PFTeDA	Auto	5.581	63804	4745099	22	0.1034	ng/mL	0.1000
PFTeDA-13C	Auto	5.581	4745099	5463388	26	4.9590	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.581	4745099	4745099	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.230	1852647	1852647	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.230	1852647	5463388	26	4.8728	ng/mL	5.0000
FOSA	Auto	5.229	50028	1852647	18	0.1008	ng/mL	0.1000
N-MeFOSAA	M	5.005	15316	958684	19	0.1269	ng/mL	0.1000
N-MeFOSAA-d3	Auto	5.000	958684	5463388	26	4.7327	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.000	958684	958684	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.621	626570	626570	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.621	626570	5463388	26	4.6685	ng/mL	5.0000
N-MeFOSA	Auto	5.624	15615	626570	1	0.0975	ng/mL	0.1000
N-MeFOSE-d7	Auto	5.592	811360	5463388	26	4.9966	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.592	811360	811360	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.600	21778	811360	20	0.0975	ng/mL	0.1000

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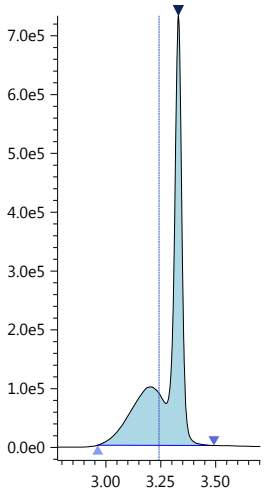
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.097	9370	950281	21	0.1086	ng/mL	0.1000
N-EtFOSAA-d5_IS	Auto	5.096	950281	950281	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.096	950281	5463388	26	4.8872	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.759	1007398	1007398	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.759	1007398	5463388	26	4.8071	ng/mL	5.0000
N-EtFOSA	Auto	5.764	3538	1007398	23	0.1099	ng/mL	0.1000
N-EtFOSE-d9_IS	Auto	5.725	872568	872568	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.725	872568	5463388	26	4.8746	ng/mL	5.0000
N-EtFOSE	M	5.734	17627	872568	24	0.0983	ng/mL	0.1000
13C7-PFUnDA_IS	Auto	5.078	5463388	5463388	26	5.0000	ng/mL	5.0000
PFPeS	M	4.205	8501	1031492	16	0.0882	ng/mL	0.0941
PFNS	M	4.877	7598	671691	13	0.0949	ng/mL	0.0962

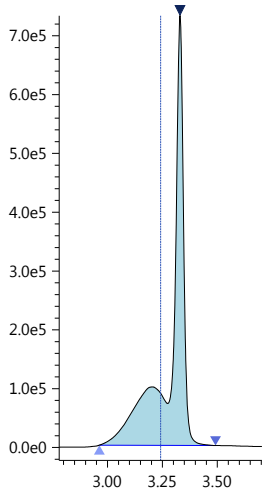
PFBA-13C_IS

Conc 5.0000
RT 3.330 Area 2797168
ISTD 216.90>172.15 (-) 7.34e5



PFBA-13C

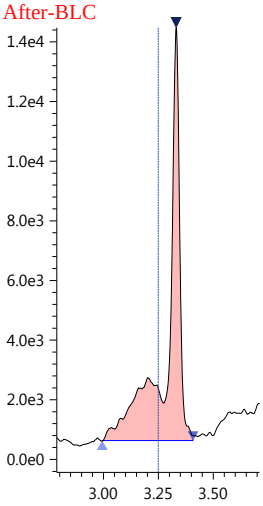
Conc 4.7432
RT 3.330 Area 2797168
Q 216.90>172.15 (-) 7.34e5



PFBA

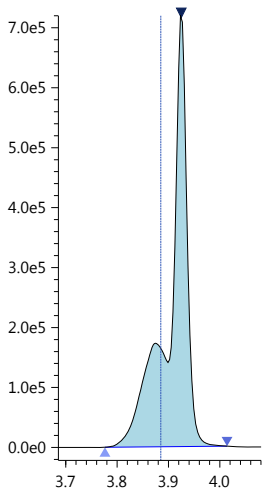
Conc 0.0957
RT 3.331 Area 53246
Q 213.00>169.10 (-) 1.45e4

After-BLC



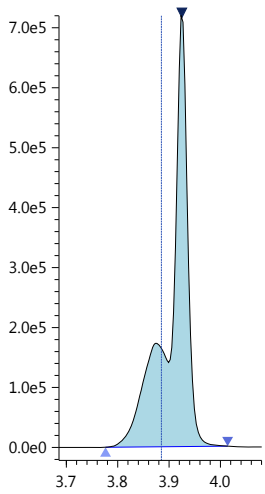
PFPeA-13C_IS

Conc 5.0000
RT 3.925 Area 1735400
ISTD 267.90>223.00 (-) 7.20e5



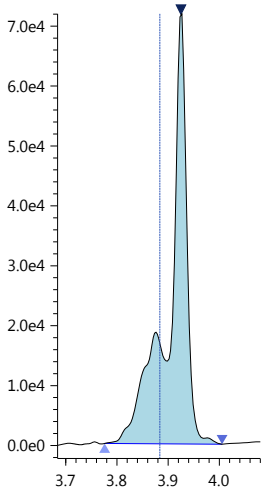
PFPeA-13C

Conc 4.8331
RT 3.925 Area 1735400
Q 267.90>223.00 (-) 7.20e5



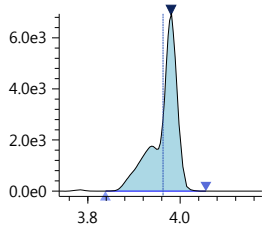
PFPeA

Conc 0.1103
RT 3.925 Area 174273
Q 263.05>219.10 (-) 7.20e4

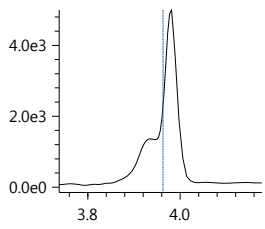


PFBS_1

Conc 0.0896
RT 3.980 Area 18604
R#1 71.46 (0.00)
Q 299.00>80.00 (-) 6.94e3

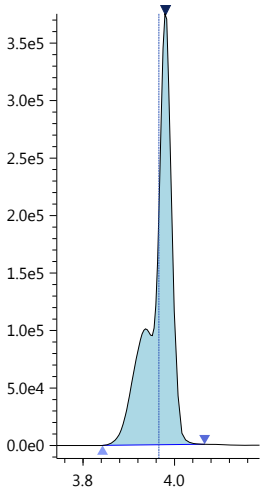


R1 298.80>99.00 (-) 5.00e3



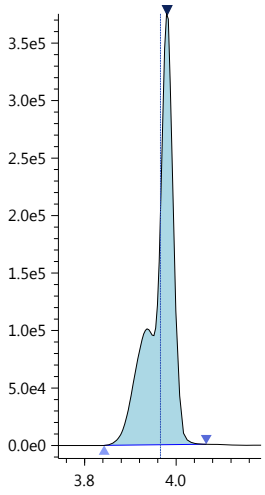
PFBS-13C

Conc 4.8031
RT 3.981 Area 1031492
Q 301.80>80.00 (-) 3.75e5



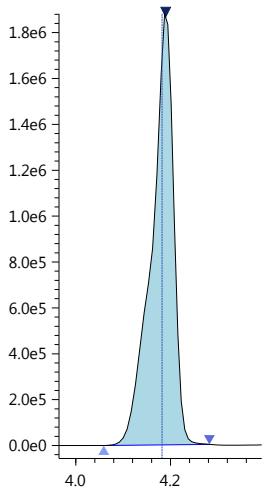
PFBS-13C_IS

Conc 5.0000
RT 3.981 Area 1031492
ISTD 301.80>80.00 (-) 3.75e5



PFHxA-13C_IS

Conc 5.0000
RT 4.190 Area 6011202
ISTD 314.90>270.10 (-) 1.88e6



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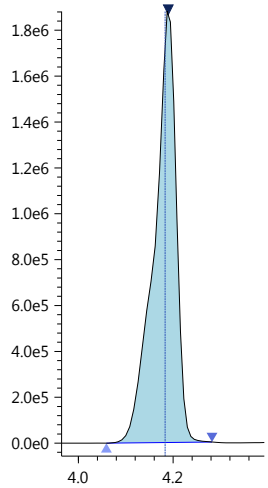
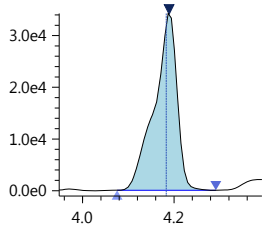
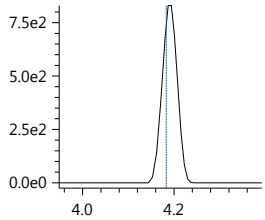
PFHxA-13C
Conc 4.9204
RT 4.190 Area 6011202
Q 314.90>270.10 (-) 1.88e6



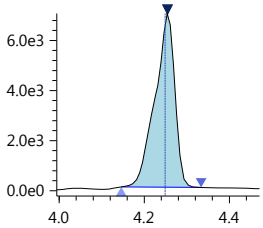
PFHxA
Conc 0.1069
RT 4.189 Area 117021
R#1 2.42 (0.00)
Q 313.00>269.00 (-) 3.43e4



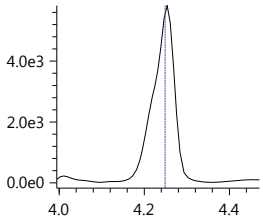
R1 313.00>119.10 (-) 8.30e2



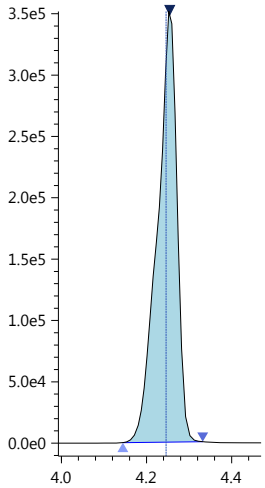
HPFO_DA
Conc 0.0983
RT 4.255 Area 22451
R#1 83.46 (0.00)
Q 329.00>169.00 (-) 7.08e3



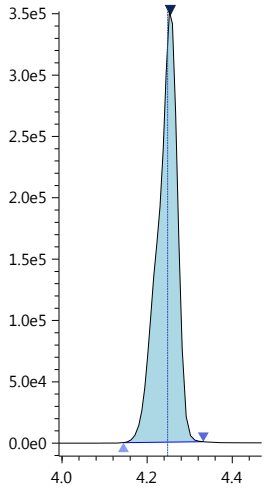
R1 329.00>285.10 (-) 5.83e3



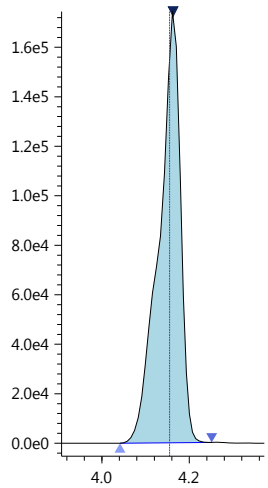
HFPO_DA-13C_IS
Conc 5.0000
RT 4.255 Area 1125689
ISTD 332.00>286.80 (-) 3.52e5



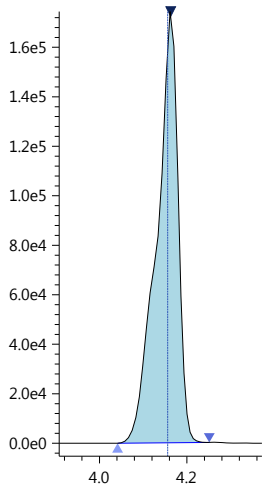
HFPO_DA-13C
Conc 4.9104
RT 4.255 Area 1125689
Q 332.00>286.80 (-) 3.52e5



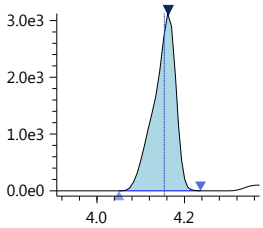
4_2-FTS-13C_IS
Conc 5.0000
RT 4.163 Area 590381
ISTD 328.80>309.05 (-) 1.74e5



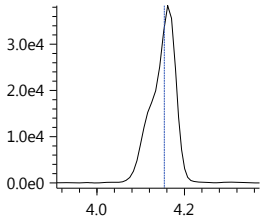
4_2-FTS-13C
Conc 4.8228
RT 4.163 Area 590381
Q 328.80>309.05 (-) 1.74e5



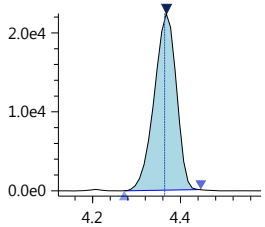
4_2-FTS_1
Conc 0.0945
RT 4.163 Area 10763
R#1 1223.85 (0.00)
Q 327.00>307.05 (-) 3.12e3



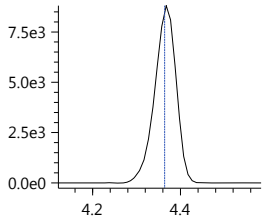
R1 327.00>81.10 (-) 3.83e4



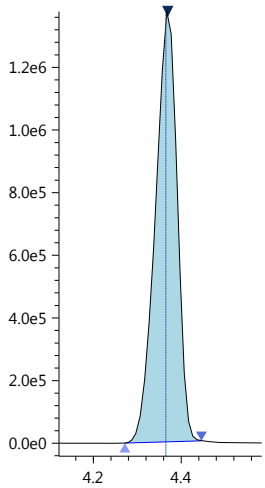
PFHpA
Conc 0.0965
RT 4.368 Area 78252
R#1 39.32 (0.00)
Q 362.90>319.00 (-) 2.25e4



R1 362.90>169.00 (-) 8.81e3



PFHpA-13C_IS
Conc 5.0000
RT 4.369 Area 4753285
ISTD 366.90>322.10 (-) 1.38e6



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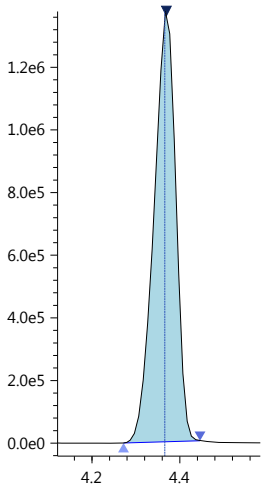
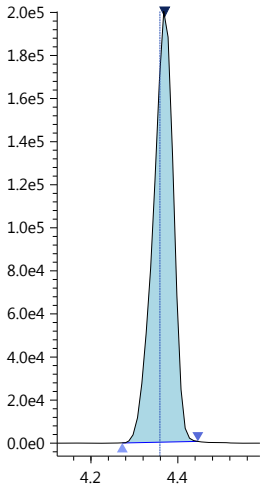
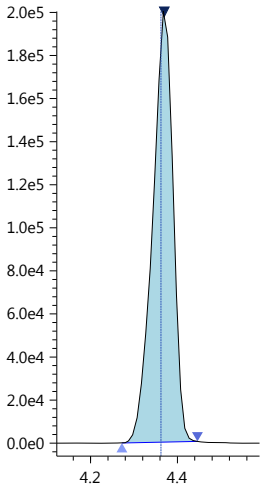
PFHpA-13C
Conc 4.7363
RT 4.369 Area 4753285
Q 366.90>322.10 (-) 1.38e6



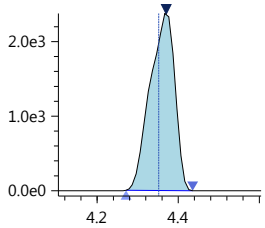
PFHxS-18O_IS
Conc 5.0000
RT 4.370 Area 655833
ISTD 402.70>84.05 (-) 2.00e5



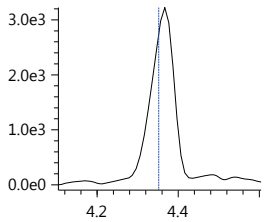
PFHxS-18O
Conc 5.3949
RT 4.370 Area 655833
Q 402.70>84.05 (-) 2.00e5



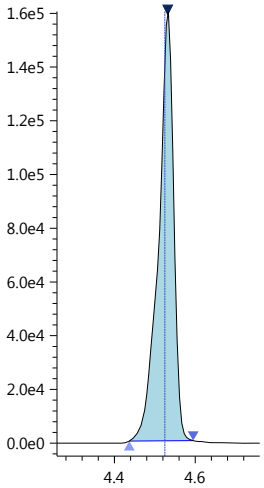
PFHxS_1
Conc 0.0781
RT 4.370 Area 10182
R#1 130.06 (0.00)
Q 399.00>80.00 (-) 2.38e3



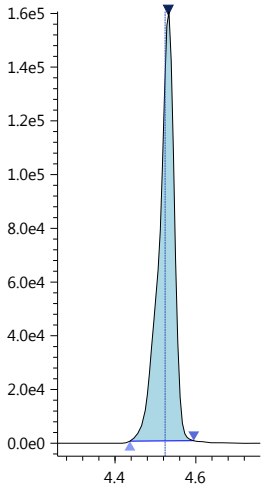
R1 399.00>99.00 (-) 3.22e3



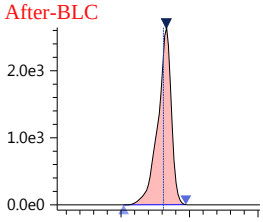
6_2-FTS-13C
Conc 4.8112
RT 4.532 Area 414328
Q 428.90>409.00 (-) 1.61e5



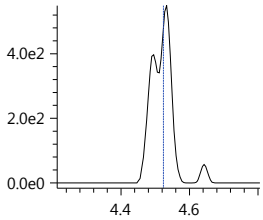
6_2-FTS-13C_IS
Conc 5.0000
RT 4.532 Area 414328
ISTD 428.90>409.00 (-) 1.61e5



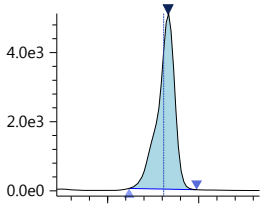
6_2-FTS_1
Conc 0.0870
RT 4.532 Area 7134
R#1 20.37 (0.00)
Q 427.00>407.00 (-) 2.64e3
After-BLC



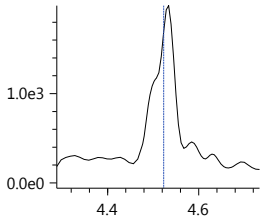
R1 427.00>80.90 (-) 5.49e2



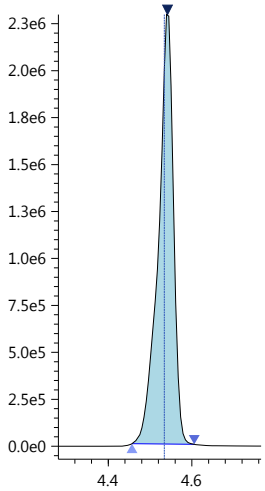
PFHpS_1
Conc 0.0821
RT 4.533 Area 12884
R#1 32.54 (0.00)
Q 449.00>80.15 (-) 5.13e3



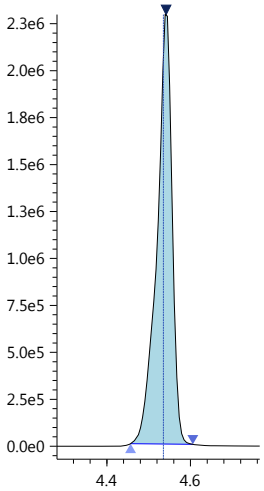
R1 449.00>99.20 (-) 1.99e3



PFOA-13C_IS
Conc 5.0000
RT 4.542 Area 5746274
ISTD 416.80>372.05 (-) 2.30e6



PFOA-13C
Conc 5.0255
RT 4.542 Area 5746274
Q 416.80>372.05 (-) 2.30e6



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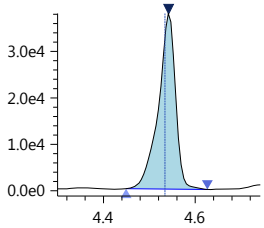
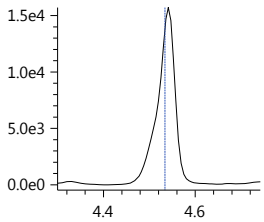
PFOA
Conc 0.0965
RT 4.542 Area 97968
R#1 41.61 (0.00)
Q 413.00>369.00 (-) 3.82e4

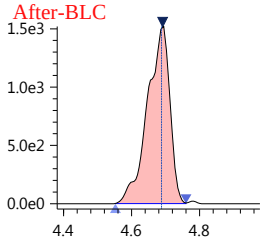


R1 413.00>169.10 (-) 1.57e4

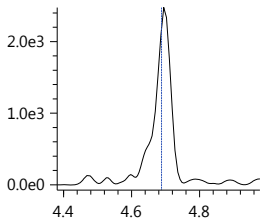


PFOS_1
Conc 0.0723
RT 4.691 Area 6956
R#1 139.52 (0.00)
Q 499.00>80.00 (-) 1.52e3

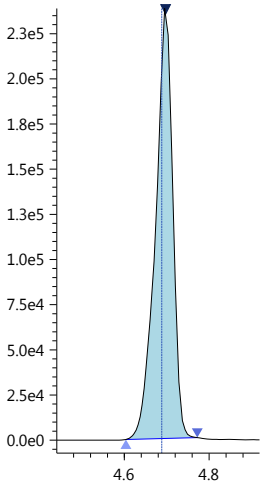
After-BLC



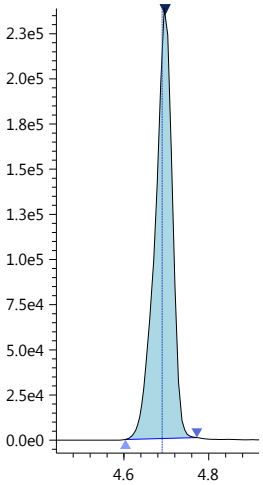
R1 499.00>99.00 (-) 2.48e3



PFOS-13C_IS
Conc 5.0000
RT 4.697 Area 671691
ISTD 502.80>80.05 (-) 2.39e5



PFOS-13C
Conc 4.9006
RT 4.697 Area 671691
Q 502.80>80.05 (-) 2.39e5



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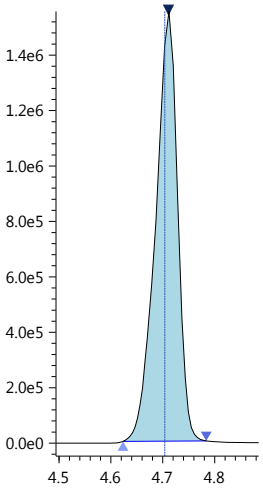
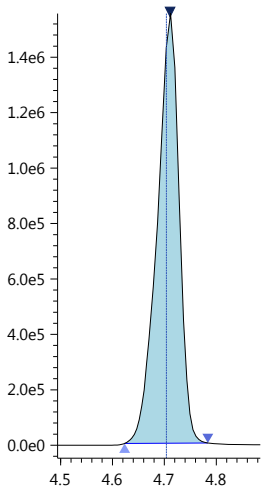
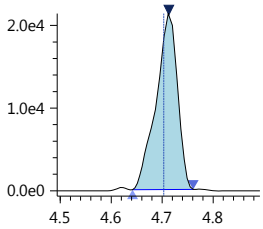
Conc 5.0000
RT 4.711 Area 4566291
ISTD 467.80>423.00 (-) 1.56e6



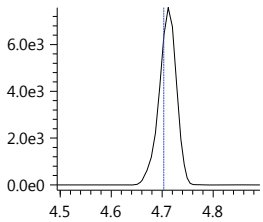
PFNA-13C
Conc 4.6302
RT 4.711 Area 4566291
Q 467.80>423.00 (-) 1.56e6



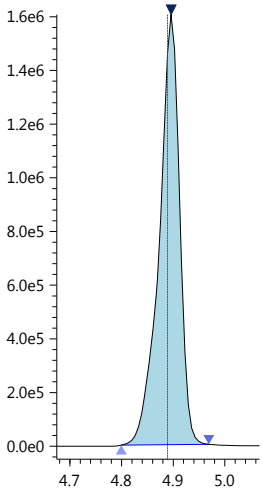
PFNA
Conc 0.1011
RT 4.713 Area 62099
R#1 35.23 (0.00)
Q 463.00>418.90 (-) 2.14e4



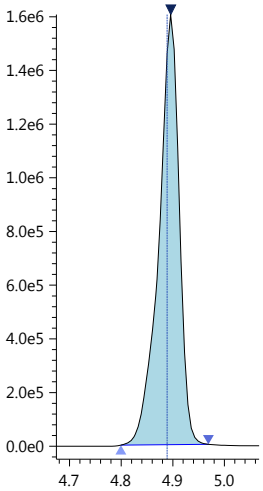
R1 463.00>219.00 (-) 7.58e3



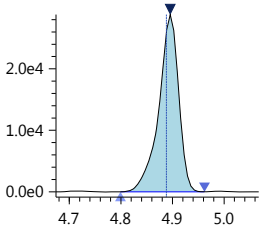
PFDA-13C_IS
Conc 5.0000
RT 4.896 Area 4386078
ISTD 514.80>469.95 (-) 1.61e6



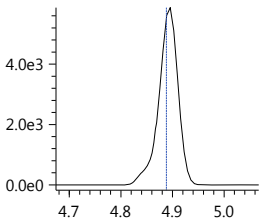
PFDA-13C
Conc 4.8002
RT 4.896 Area 4386078
Q 514.80>469.95 (-) 1.61e6



PFDA
Conc 0.1036
RT 4.895 Area 76768
R#1 20.36 (0.00)
Q 513.00>468.80 (-) 2.88e4



R1 513.00>219.10 (-) 5.87e3



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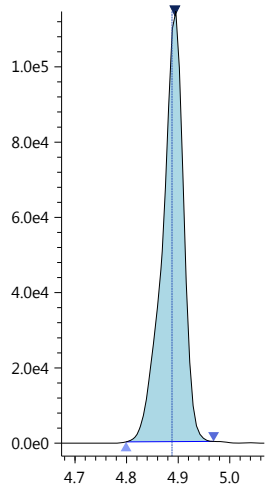
8_2-FTS-13C_IS
Conc 5.0000
RT 4.894 Area 324159
ISTD 528.80>509.00 (-) 1.15e5



8_2-FTS-13C
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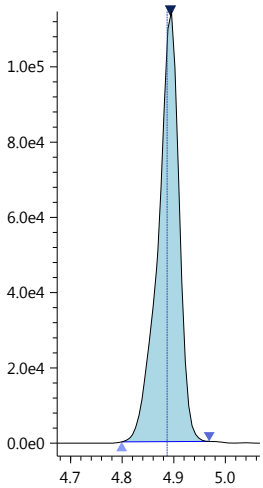
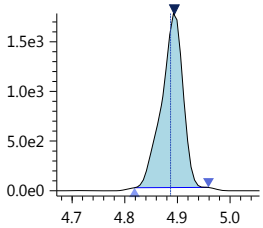
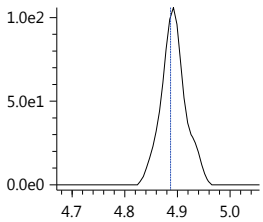
RT 4.894 Area 324159
Q 528.80>509.00 (-) 1.15e5



8_2-FTS_1
Conc 0.0958
RT 4.894 Area 4929
R#1 6.04 (0.00)
Q 527.10>506.90 (-) 1.79e3



R1 527.20>487.00 (-) 1.06e2



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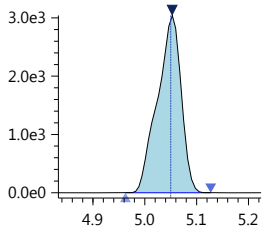
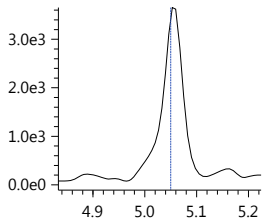
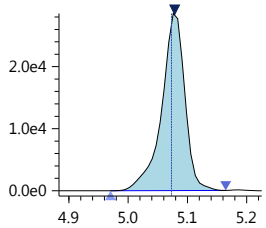
Conc 0.0834
RT 5.053 Area 9665
R#1 118.58 (0.00)
Q 599.00>79.90 (-) 3.04e3



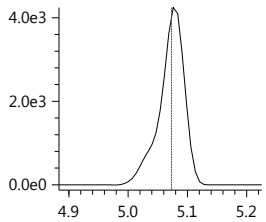
R1 599.00>99.10 (-) 3.65e3



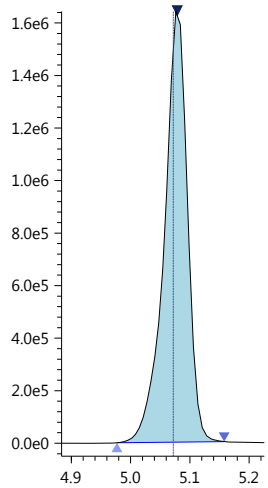
PFUnA
Conc 0.1025
RT 5.079 Area 77717
R#1 14.86 (0.00)
Q 563.00>518.90 (-) 2.86e4



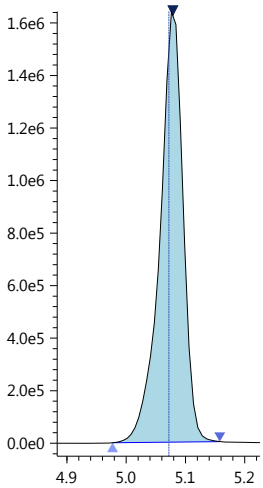
R1 563.00>219.00 (-) 4.24e3



PFUnA-13C_IS
Conc 5.0000
RT 5.079 Area 4461105
ISTD 564.80>519.95 (-) 1.64e6



PFUnA-13C
Conc 5.0197
RT 5.079 Area 4461105
Q 564.80>519.95 (-) 1.64e6



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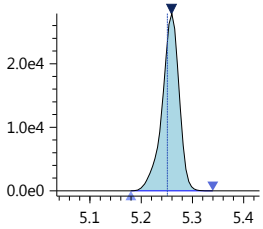
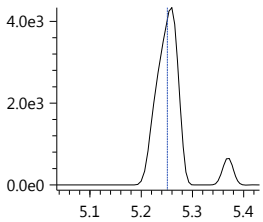
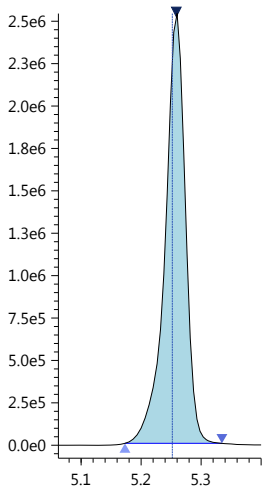
Conc 0.1023
RT 5.259 Area 64278
R#1 15.25 (0.00)
Q 613.05>569.00 (-) 2.79e4



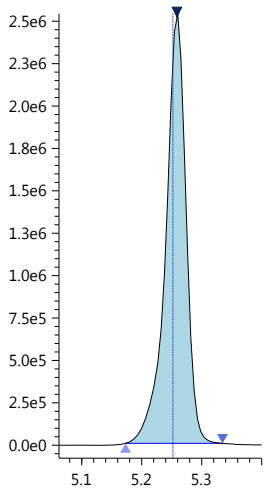
R1 613.05>169.00 (-) 4.34e3



PFDoA-13C
Conc 4.9069
RT 5.259 Area 5960677
Q 614.80>569.95 (-) 2.54e6



PFDoA-13C_IS
Conc 5.0000
RT 5.259 Area 5960677
ISTD 614.80>569.95 (-) 2.54e6



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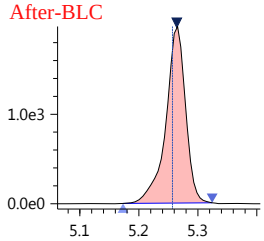
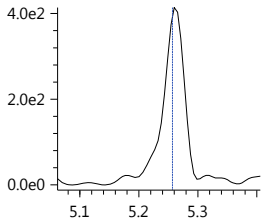
10_2-FtS_1

Conc 0.0963
RT 5.264 Area 4564
R#1 20.60 (0.00)

Q 627.00>606.95 (-) 1.98e3



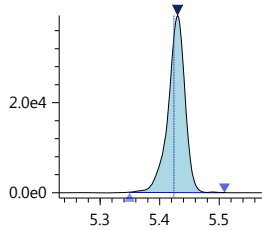
R1 627.00>81.25 (-) 4.14e2



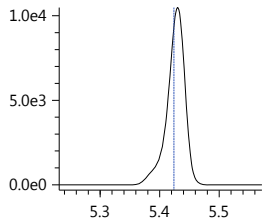
PFTrDA

Conc 0.0975
RT 5.430 Area 77536
R#1 22.06 (0.00)

Q 663.00>618.90 (-) 3.94e4



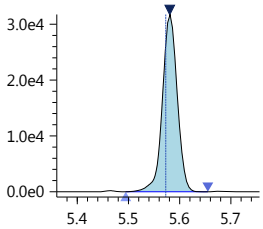
R1 662.90>169.00 (-) 1.05e4



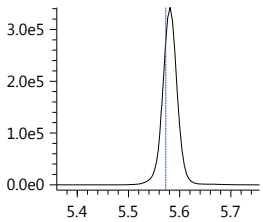
PFTeDA

Conc 0.1034
RT 5.581 Area 63804
R#1 1071.23 (0.00)

Q 713.40>669.00 (-) 3.18e4



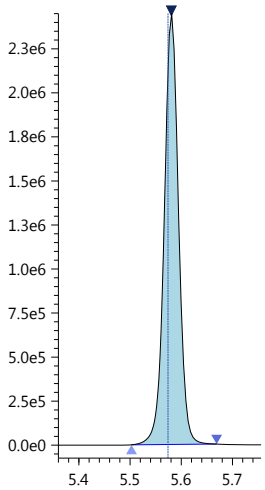
R1 713.40>169.10 (-) 3.42e5



PFTeDA-13C

Conc 4.9590
RT 5.581 Area 4745099

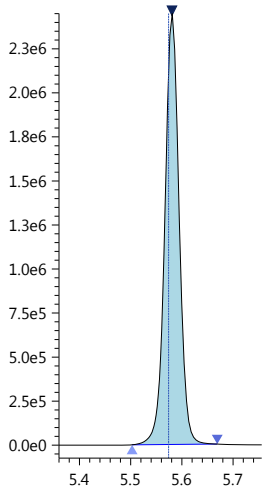
Q 714.70>669.90 (-) 2.45e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.581 Area 4745099

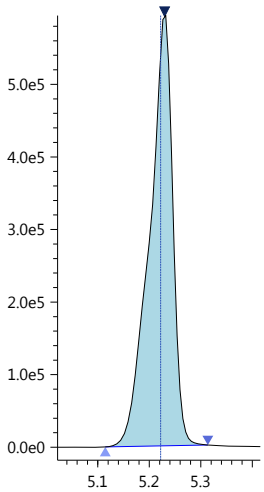
ISTD 714.70>669.90 (-) 2.45e6



FOSA-13C_IS

Conc 5.0000
RT 5.230 Area 1852647

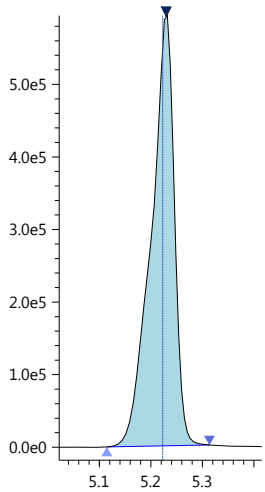
ISTD 506.00>78.05 (-) 5.95e5



FOSA-13C

Conc 4.8728
RT 5.230 Area 1852647

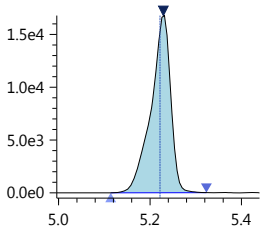
Q 506.00>78.05 (-) 5.95e5



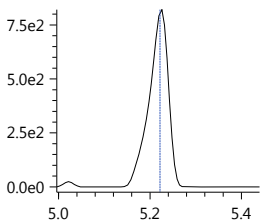
FOSA

Conc 0.1008
RT 5.229 Area 50028
R#1 5.04 (0.00)

Q 498.20>78.00 (-) 1.68e4



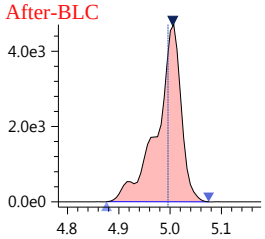
R1 498.20>64.10 (-) 8.21e2



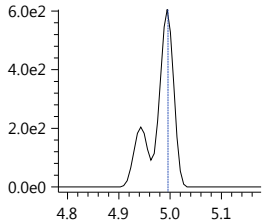
N-MeFOSAA

Conc 0.1269
RT 5.005 Area 15316
R#1 7.13 (0.00)

Q 570.20>419.00 (-) 4.71e3



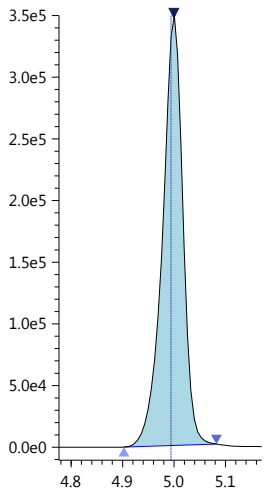
R1 570.20>512.00 (-) 6.05e2



N-MeFOSAA-d3

Conc 4.7327
RT 5.000 Area 958684

Q 572.80>419.05 (-) 3.50e5



Insight Report

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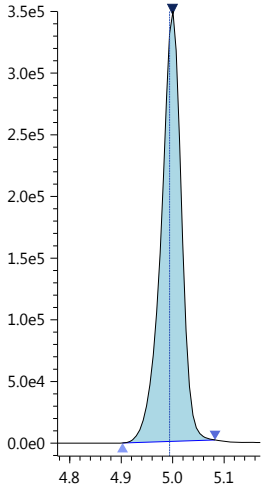
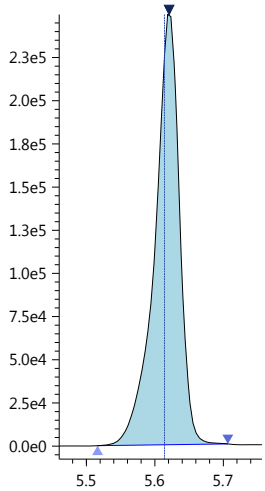
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.000 Area 958684

ISTD 572.80>419.05 (-) 3.50e5



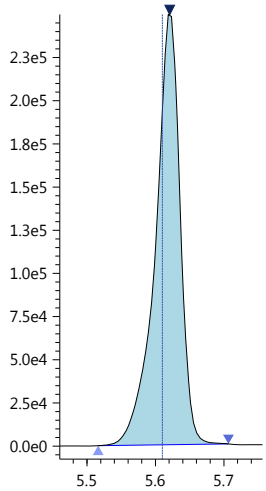
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.621 Area 626570

ISTD 514.90>168.90 (-) 2.50e5



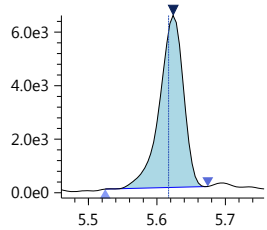
N-MeFOSA-d3
Conc 4.6685
RT 5.621 Area 626570

Q 514.90>168.90 (-) 2.50e5

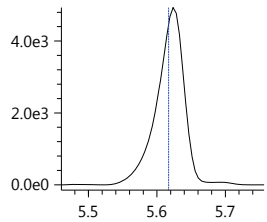


N-MeFOSA
Conc 0.0975
RT 5.624 Area 15615
R#1 76.14 (0.00)

Q 512.00>169.10 (-) 6.62e3

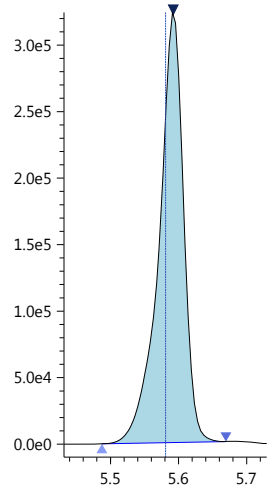


R1 512.00>219.00 (-) 4.93e3



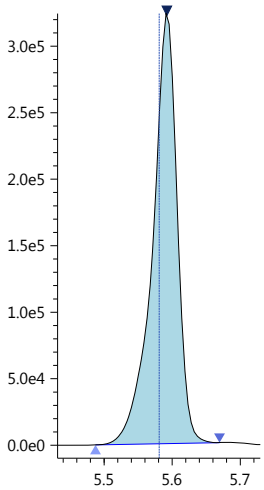
N-MeFOSE-d7
Conc 4.9966
RT 5.592 Area 811360

Q 622.70>59.10 (-) 3.25e5



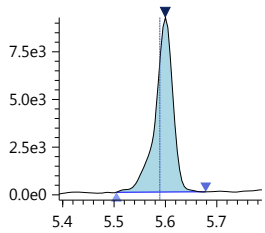
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 811360

ISTD 622.70>59.10 (-) 3.25e5

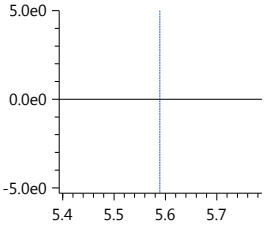


N-MeFOSE
Conc 0.0975
RT 5.600 Area 21778
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 9.29e3

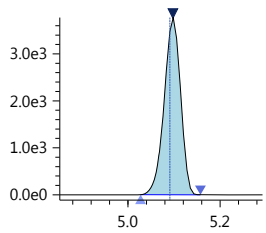


R1 556.00>121.20 (-) 0.00e0

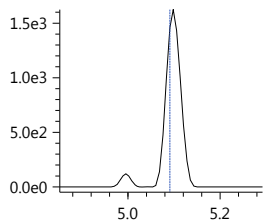


N-EtFOSAA
Conc 0.1086
RT 5.097 Area 9370
R#1 43.58 (0.00)

Q 584.20>418.95 (-) 3.77e3

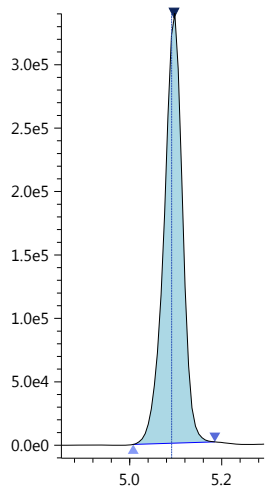


R1 584.20>526.10 (-) 1.62e3



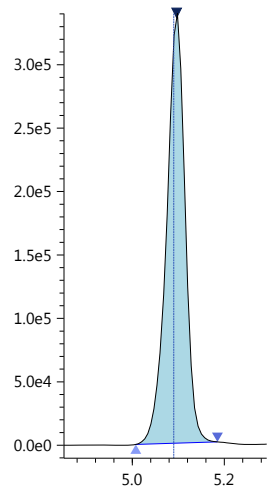
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.096 Area 950281

ISTD 588.80>419.00 (-) 3.40e5



N-EtFOSAA-d5
Conc 4.8872
RT 5.096 Area 950281

Q 588.80>419.00 (-) 3.40e5



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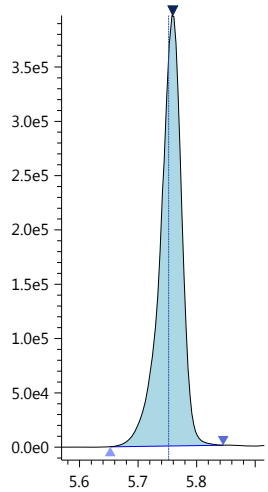
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.759 Area 1007398
ISTD 530.90>169.15 (-) 3.97e5



N-EtFOSA-d9
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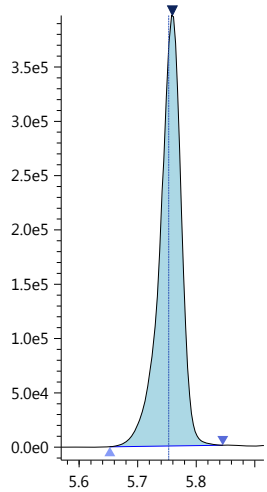
RT 5.759 Area 1007398
Q 530.90>169.15 (-) 3.97e5



N-EtFOSA
Conc 0.1099
RT 5.764 Area 3538
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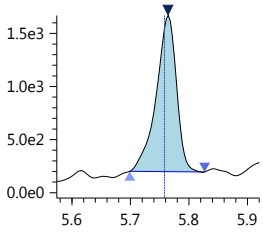
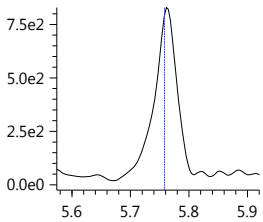
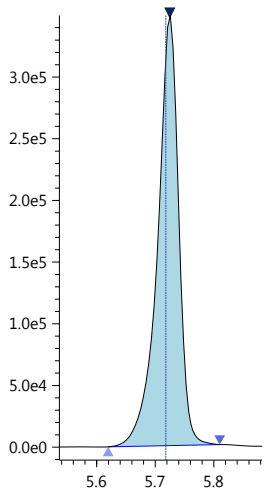
Q 526.90>169.10 (-) 1.67e3



R1 526.90>219.00 (-) 8.29e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.725 Area 872568
ISTD 638.70>59.10 (-) 3.50e5



N-EtFOSE-d9
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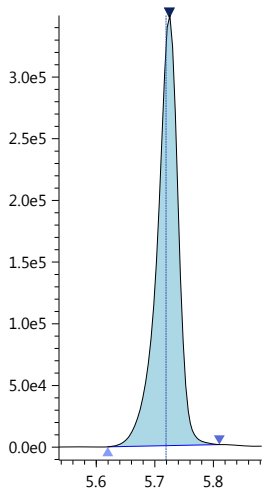
RT 5.725 Area 872568
Q 638.70>59.10 (-) 3.50e5



N-EtFOSE
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RT 5.734 Area 17627
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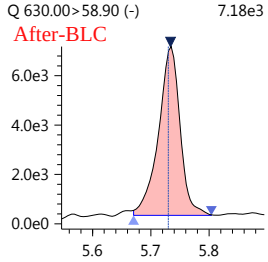
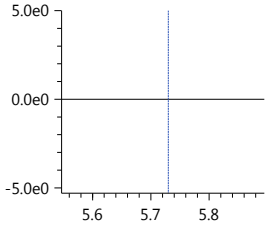
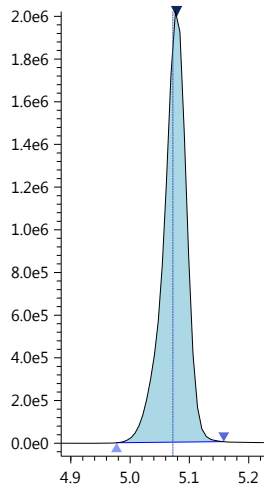
Q 630.00>58.90 (-) 7.18e3



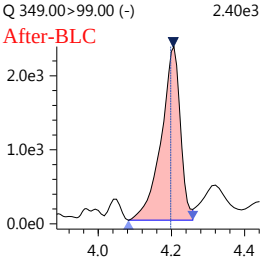
R1 570.00>136.10 (-) 0.00e0



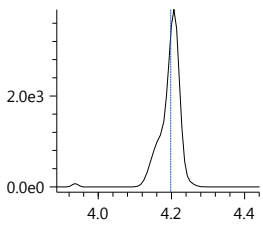
13C7-PFUnDA_IS
Conc 5.0000
RT 5.078 Area 5463388
ISTD 570.00>525.00 (-) 2.02e6



PFPeS
Conc 0.0882
RT 4.205 Area 8501
R#1 160.01 (0.00)
Q 349.00>99.00 (-) 2.40e3



R1 349.00>79.95 (-) 3.90e3



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Conc 0.0949
RT 4.877 Area 7598
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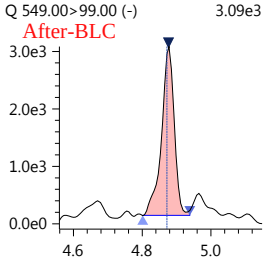
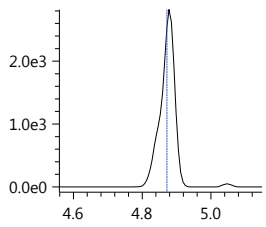
Q 549.00>99.00 (-) 3.09e3



R1 549.00>79.95 (-) 2.82e3



Insight Report

Printed at 1/21/2019 9:31:25 AM

190118_024

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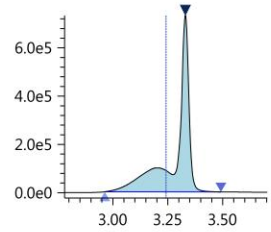
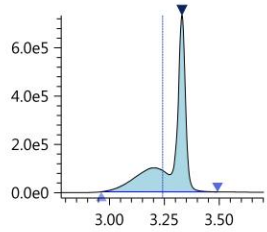
Date acquired: 1/18/2019 5:57:44 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_024.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.330 Area 2797168
ISTD 216.90>172.15 (-) 7.34e5



PFBA-13C
Conc 4.7432
RT 3.330 Area 2797168
Q 216.90>172.15 (-) 7.34e5



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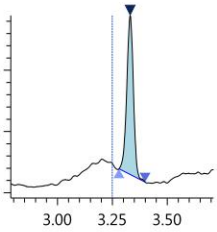
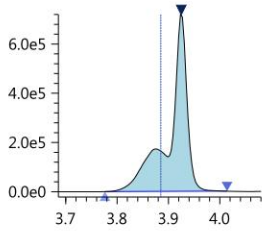
Conc 0.0102
RT 3.331 Area 27282
Q 213.00>169.10 (-) 1.45e4



PFPeA-13C_IS
Conc 5.0000
RT 3.925 Area 1735400
ISTD 267.90>223.00 (-) 7.20e5



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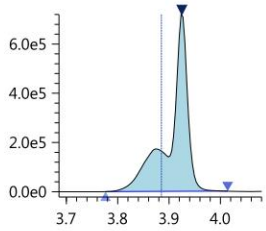
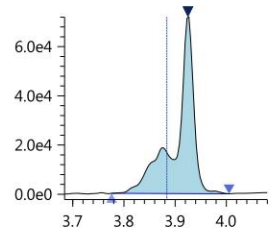
Conc 4.8331
RT 3.925 Area 1735400
Q 267.90>223.00 (-) 7.20e5



PFPeA
Conc 0.0436
RT 3.925 Area 174273
Q 263.05>219.10 (-) 7.20e4



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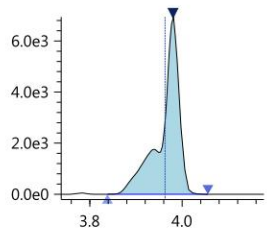
RT 3.980 Area 18604
Q 299.00>80.00 (-) 6.94e3



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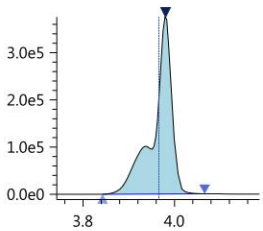
Q 301.80>80.00 (-) 3.75e5



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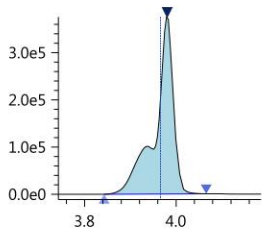

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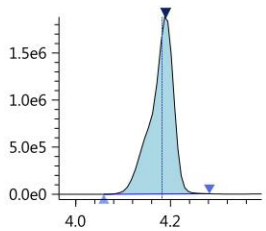
Conc 5.0000
RT 4.190 Area 6011202
ISTD 314.90>270.10 (-) 1.88e6



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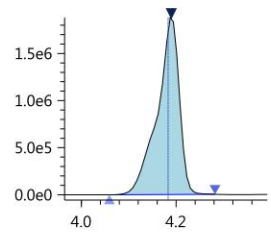
Q 314.90>270.10 (-) 1.88e6



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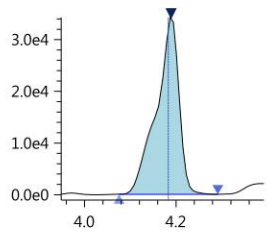
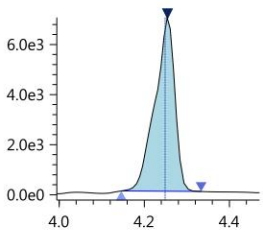
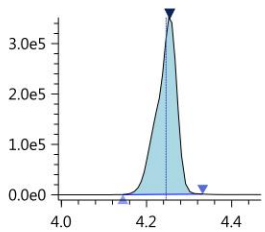
Conc 0.0232
RT 4.189 Area 117021
Q 313.00>269.00 (-) 3.43e4



HPFO_DA
Conc 0.0208
RT 4.255 Area 22451
Q 329.00>169.00 (-) 7.08e3



HFPO_DA-13C_IS
Conc 5.0000
RT 4.255 Area 1125689
ISTD 332.00>286.80 (-) 3.52e5



HFPO_DA-13C
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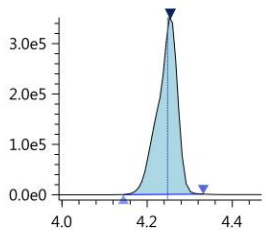
Q 332.00>286.80 (-) 3.52e5



4_2-FTS-13C_IS
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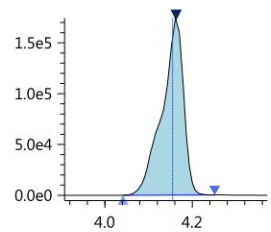
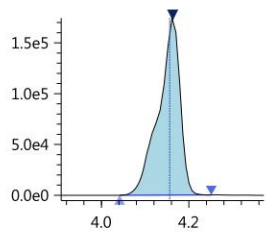
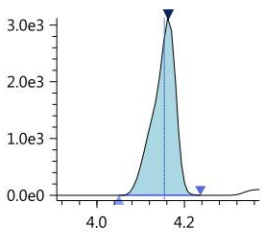
RT 4.163 Area 590381
ISTD 328.80>309.05 (-) 1.74e5



4_2-FTS-13C
Conc 4.8228
RT 4.163 Area 590381
Q 328.80>309.05 (-) 1.74e5



4_2-FTS_1
Conc 0.0218
RT 4.163 Area 10763
Q 327.00>307.05 (-) 3.12e3



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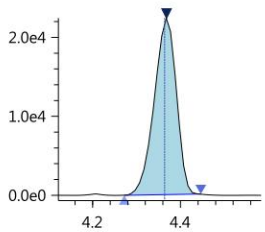
Conc 0.0191
RT 4.368 Area 78252
Q 362.90>319.00 (-) 2.25e4



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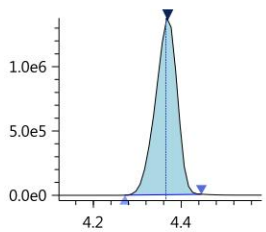
Conc 5.0000
RT 4.369 Area 4753285
ISTD 366.90>322.10 (-) 1.38e6



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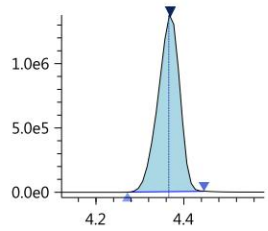
PFHpA-13C
Conc 4.7363
RT 4.369 Area 4753285
Q 366.90>322.10 (-) 1.38e6



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Conc 5.0000
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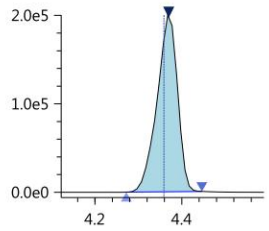
ISTD 402.70>84.05 (-) 2.00e5



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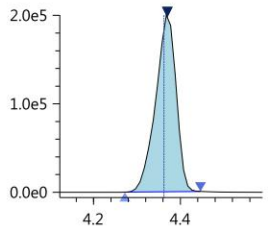
Q 402.70>84.05 (-) 2.00e5



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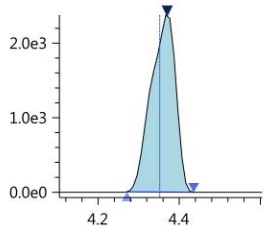
Conc 0.0173
RT 4.370 Area 10182
Q 399.00>80.00 (-) 2.38e3



6_2-FTS-13C
Conc 4.8112
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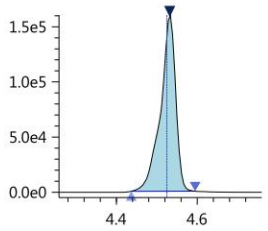
Q 428.90>409.00 (-) 1.61e5



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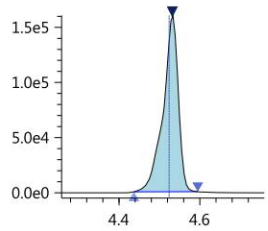
RT 4.532 Area 414328
ISTD 428.90>409.00 (-) 1.61e5



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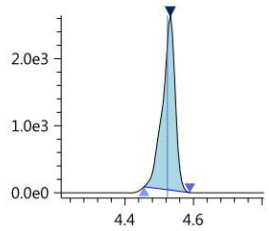
RT 4.532 Area 6710
Q 427.00>407.00 (-) 2.64e3



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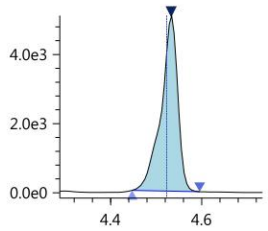
Q 449.00>80.15 (-) 5.13e3



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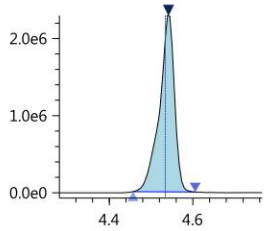
ISTD 416.80>372.05 (-) 2.30e6



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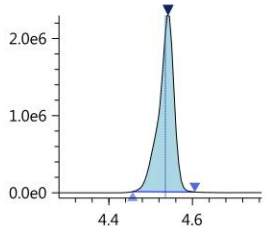

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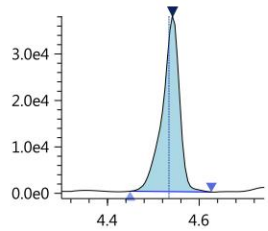
Q 413.00>369.00 (-) 3.82e4



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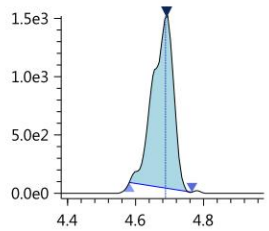
Q 499.00>80.00 (-) 1.52e3



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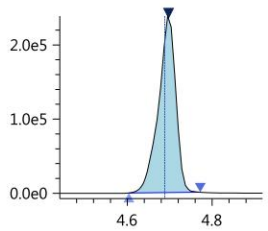

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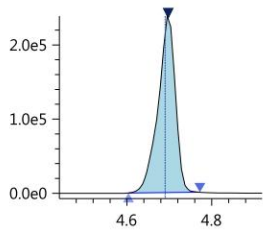
Q 502.80>80.05 (-) 2.39e5



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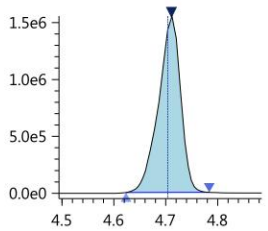
ISTD 467.80>423.00 (-) 1.56e6



PFNA-13C
Conc 4.6302
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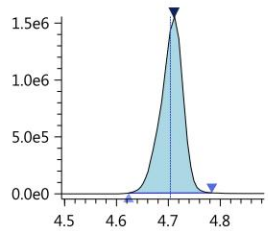
Q 467.80>423.00 (-) 1.56e6



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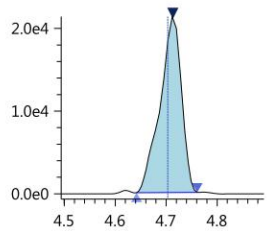
Q 463.00>418.90 (-) 2.14e4



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RT 4.896 Area 4386078
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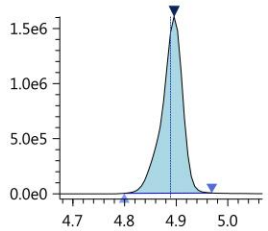

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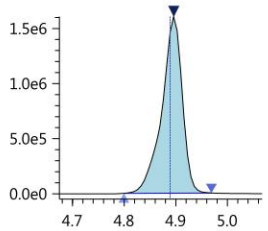

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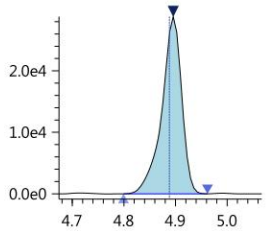

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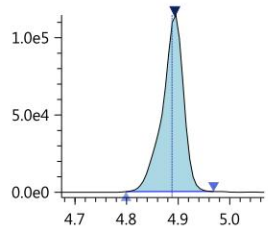
8_2-FTS-13C_IS
Conc 5.0000
RT 4.894 Area 324159
ISTD 528.80>509.00 (-) 1.15e5



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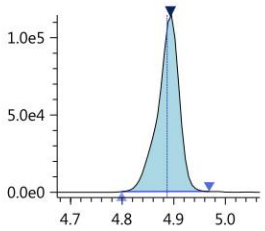

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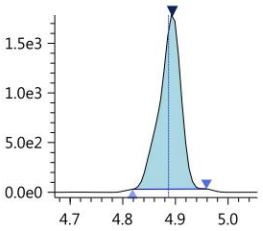
Q 527.10>506.90 (-) 1.79e3



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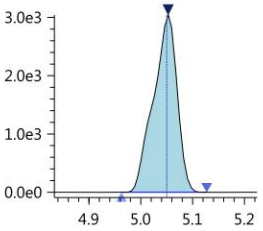

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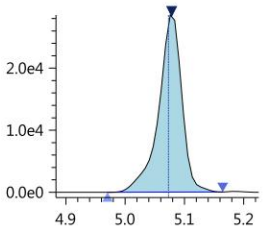

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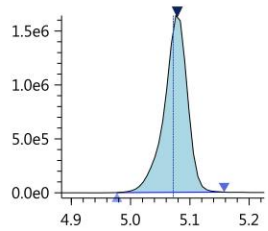
ISTD 564.80>519.95 (-) 1.64e6



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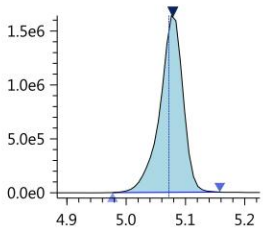

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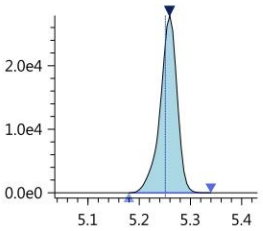

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Conc 4.9069
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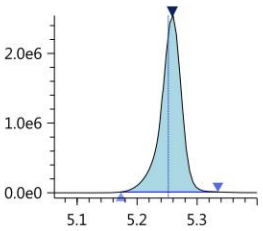
Q 614.80>569.95 (-) 2.54e6



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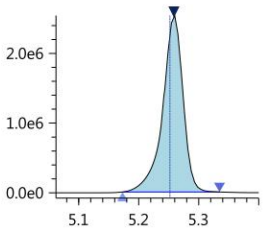
ISTD 614.80>569.95 (-) 2.54e6



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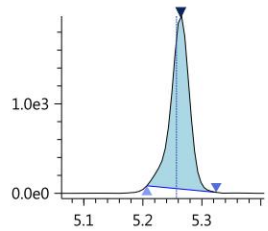

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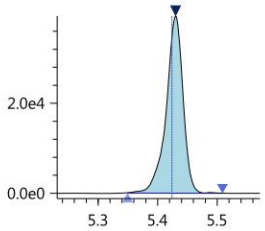
RT 5.430 Area 77536
Q 663.00>618.90 (-) 3.94e4



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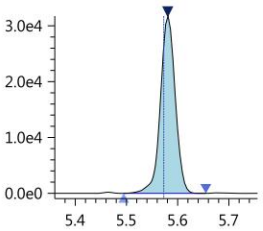
RT 5.581 Area 63804
Q 713.40>669.00 (-) 3.18e4



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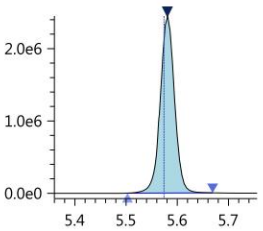
RT 5.581 Area 4745099
Q 714.70>669.90 (-) 2.45e6



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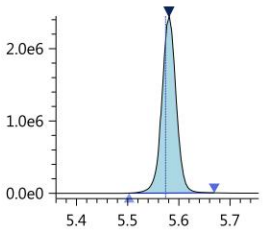

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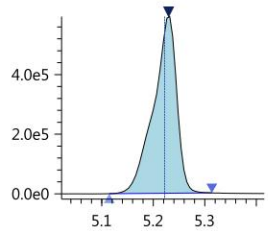
Conc 5.0000
RT 5.230 Area 1852647
ISTD 506.00>78.05 (-) 5.95e5



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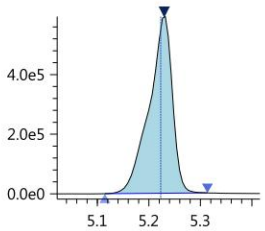
Q 506.00>78.05 (-) 5.95e5



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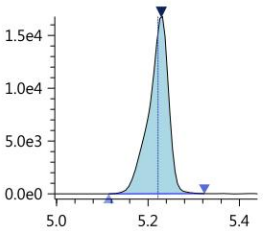
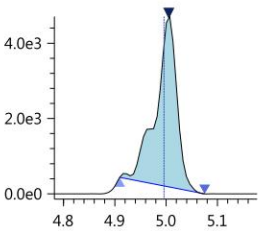
Conc 0.0221
RT 5.229 Area 50028
Q 498.20>78.00 (-) 1.68e4



N-MeFOSAA
Conc 0.0244
RT 5.005 Area 12877
Q 570.20>419.00 (-) 4.71e3



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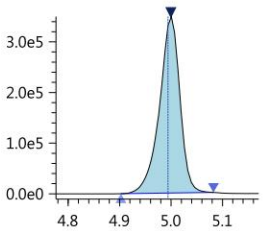
RT 5.000 Area 958684
Q 572.80>419.05 (-) 3.50e5



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N-MeFOSAA-d3_IS
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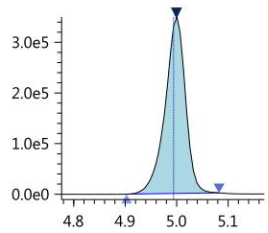
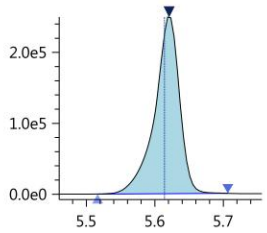
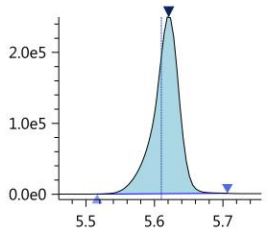
ISTD 572.80>419.05 (-) 3.50e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.621 Area 626570
ISTD 514.90>168.90 (-) 2.50e5



N-MeFOSA-d3
Conc 4.6685
RT 5.621 Area 626570
Q 514.90>168.90 (-) 2.50e5



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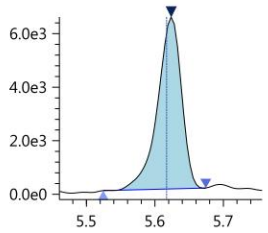
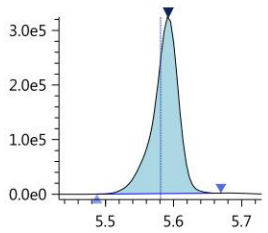
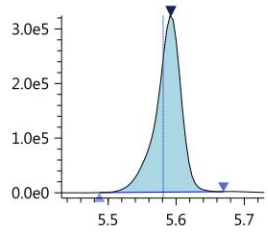
Conc 0.0214
RT 5.624 Area 15615
Q 512.00>169.10 (-) 6.62e3



N-MeFOSE-d7
Conc 4.9966
RT 5.592 Area 811360
Q 622.70>59.10 (-) 3.25e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 811360
ISTD 622.70>59.10 (-) 3.25e5



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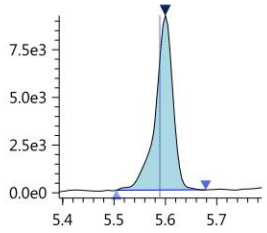
Conc 0.0211
RT 5.600 Area 21778
Q 616.00>59.00 (-) 9.29e3



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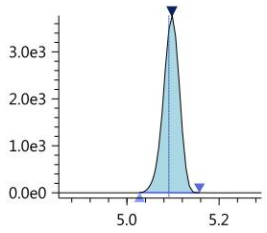
Conc 0.0212
RT 5.097 Area 9370
Q 584.20>418.95 (-) 3.77e3



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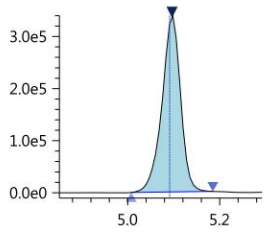
Conc 5.0000
RT 5.096 Area 950281
ISTD 588.80>419.00 (-) 3.40e5



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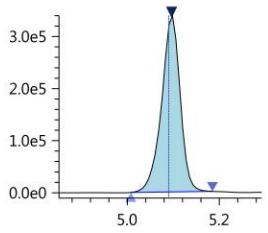
Conc 4.8872
RT 5.096 Area 950281
Q 588.80>419.00 (-) 3.40e5



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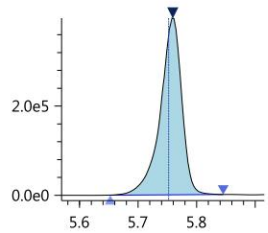
Conc 5.0000
RT 5.759 Area 1007398
ISTD 530.90>169.15 (-) 3.97e5



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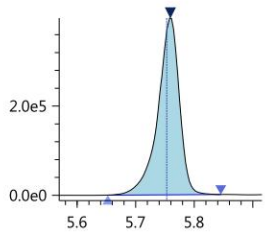
RT 5.759 Area 1007398
Q 530.90>169.15 (-) 3.97e5



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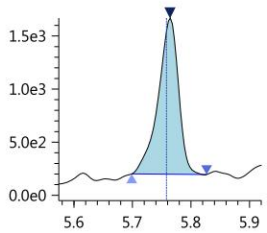
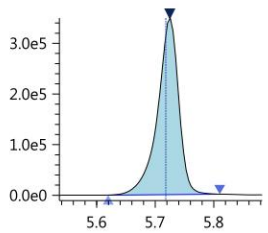
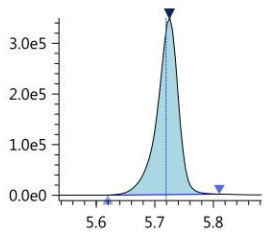
Conc 0.0235
RT 5.764 Area 3538
Q 526.90>169.10 (-) 1.67e3



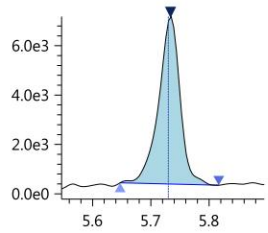
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.725 Area 872568
ISTD 638.70>59.10 (-) 3.50e5



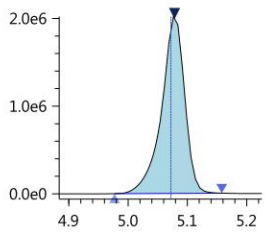
N-EtFOSE-d9
Conc 4.8746
RT 5.725 Area 872568
Q 638.70>59.10 (-) 3.50e5



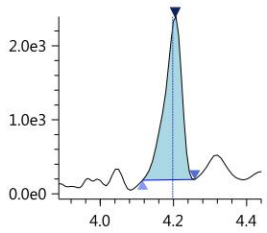
N-EtFOSE
Conc 0.0209
RT 5.734 Area 17297
Q 630.00>58.90 (-) 7.18e3



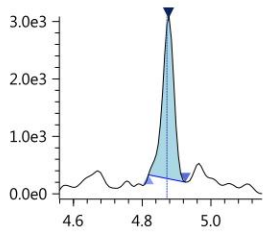
13C7-PFUnDA_IS
Conc 5.0000
RT 5.078 Area 5463388
ISTD 570.00>525.00 (-) 2.02e6



PFPeS
Conc 0.0170
RT 4.205 Area 7188
Q 349.00>99.00 (-) 2.40e3



PFNS
Conc 0.0186
RT 4.877 Area 6707
Q 549.00>99.00 (-) 3.09e3



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_025

Sample ID: 0.50 PPB ICAL
Date acquired: 1/18/2019 6:08:09 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_025.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.324	2760044	2760044	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.324	2760044	5348302	26	4.7810	ng/mL	5.0000
PFBA	M	3.325	269879	2760044	2	0.4917	ng/mL	0.5000
PFPeA-13C_IS	Auto	3.918	1701662	1701662	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.918	1701662	5348302	26	4.8411	ng/mL	5.0000
PFPeA	Auto	3.918	490696	1701662	4	0.4866	ng/mL	0.5000
PFBS_1	Auto	3.972	86098	1018210	16	0.4203	ng/mL	0.4437
PFBS-13C	Auto	3.973	1018210	5348302	26	4.8433	ng/mL	5.0000
PFBS-13C_IS	Auto	3.973	1018210	1018210	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.182	5960695	5960695	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.182	5960695	5348302	26	4.9840	ng/mL	5.0000
PFHxA	Auto	4.182	497234	5960695	6	0.4520	ng/mL	0.5000
HPFO_DA	Auto	4.248	109994	1107751	3	0.4894	ng/mL	0.5000
HFPO_DA-13C_IS	Auto	4.247	1107751	1107751	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.247	1107751	5348302	26	4.9361	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.155	607956	607956	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.155	607956	5348302	26	5.0733	ng/mL	5.0000
4_2-FTS_1	Auto	4.155	60238	607956	5	0.5137	ng/mL	0.4686
PFHpA	Auto	4.363	403979	4437074	8	0.4935	ng/mL	0.5000
PFHpA-13C_IS	Auto	4.363	4437074	4437074	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.363	4437074	5348302	26	4.5163	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.361	538506	538506	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.361	538506	5348302	26	4.5251	ng/mL	5.0000
PFHxS_1	Auto	4.354	42036	538506	7	0.3929	ng/mL	0.4565
6_2-FTS-13C	Auto	4.525	409456	5348302	26	4.8569	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.525	409456	409456	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.525	39245	409456	10	0.4845	ng/mL	0.4756
PFHpS_1	Auto	4.526	66078	538506	7	0.5128	ng/mL	0.4767
PFOA-13C_IS	Auto	4.534	5559738	5559738	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.534	5559738	5348302	26	4.9670	ng/mL	5.0000
PFOA	Auto	4.534	451317	5559738	9	0.4752	ng/mL	0.5000
PFOS_1	Auto	4.690	42289	674021	13	0.4382	ng/mL	0.4646
PFOS-13C_IS	Auto	4.691	674021	674021	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.691	674021	5348302	26	5.0234	ng/mL	5.0000
PFNA-13C_IS	Auto	4.704	4671864	4671864	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.704	4671864	5348302	26	4.8392	ng/mL	5.0000
PFNA	Auto	4.704	328238	4671864	11	0.5015	ng/mL	0.5000
PFDA-13C_IS	Auto	4.888	4285878	4285878	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.888	4285878	5348302	26	4.7915	ng/mL	5.0000
PFDA	Auto	4.888	350082	4285878	12	0.4834	ng/mL	0.5000
8_2-FTS-13C_IS	Auto	4.886	317818	317818	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.886	317818	5348302	26	4.7819	ng/mL	5.0000
8_2-FTS_1	Auto	4.886	25529	317818	15	0.5058	ng/mL	0.4800
PFDS_1	Auto	5.048	58077	674021	13	0.4994	ng/mL	0.4823
PFUnA	Auto	5.071	340640	4397434	14	0.4740	ng/mL	0.5000
PFUnA-13C_IS	Auto	5.071	4397434	4397434	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.071	4397434	5348302	26	5.0546	ng/mL	5.0000
PFDoA	Auto	5.251	323657	6032973	17	0.4983	ng/mL	0.5000
PFDoA-13C	Auto	5.250	6032973	5348302	26	5.0733	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.250	6032973	6032973	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.256	24422	317818	15	0.5257	ng/mL	0.4831
PFTrDA	Auto	5.421	396321	4617519	22	0.4974	ng/mL	0.5000
PFTeDA	Auto	5.572	185871	4617519	22	0.4977	ng/mL	0.5000
PFTeDA-13C	Auto	5.572	4617519	5348302	26	4.9295	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.572	4617519	4617519	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.221	1800927	1800927	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.221	1800927	5348302	26	4.8387	ng/mL	5.0000
FOSA	Auto	5.221	242874	1800927	18	0.5036	ng/mL	0.5000
N-MeFOSAA	M	4.994	51226	935958	19	0.4347	ng/mL	0.5000
N-MeFOSAA-d3	Auto	4.993	935958	5348302	26	4.7199	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.993	935958	935958	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.613	634569	634569	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.613	634569	5348302	26	4.8299	ng/mL	5.0000
N-MeFOSA	Auto	5.616	83377	634569	1	0.5140	ng/mL	0.5000
N-MeFOSE-d7	Auto	5.584	771678	5348302	26	4.8545	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.584	771678	771678	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.593	106426	771678	20	0.5012	ng/mL	0.5000

Insight Report

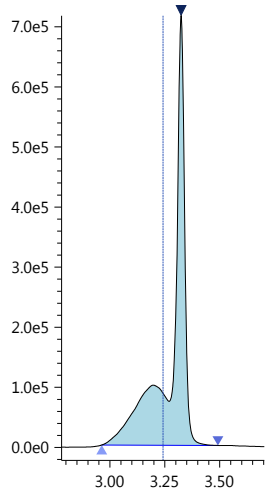
Printed at 1/21/2019 10:49:39 AM

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.093	41290	908510	21	0.4533	ng/mL	0.5000
N-EtFOSAA-d5_IS	Auto	5.089	908510	908510	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.089	908510	5348302	26	4.7730	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.751	981756	981756	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.751	981756	5348302	26	4.7856	ng/mL	5.0000
N-EtFOSA	Auto	5.756	15754	981756	23	0.5020	ng/mL	0.5000
N-EtFOSE-d9_IS	Auto	5.716	860963	860963	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.716	860963	5348302	26	4.9133	ng/mL	5.0000
N-EtFOSE	Auto	5.728	84665	860963	24	0.4785	ng/mL	0.5000
13C7-PFUnDA_IS	Auto	5.071	5348302	5348302	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.196	48856	1018210	16	0.5136	ng/mL	0.4705
PFNS	Auto	4.869	41636	674021	13	0.5182	ng/mL	0.4808

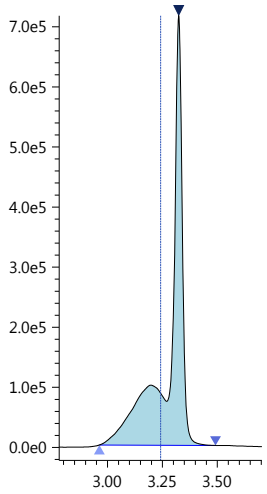
PFBA-13C_IS

Conc 5.0000
RT 3.324 Area 2760044
ISTD 216.90>172.15 (-) 7.18e5



PFBA-13C

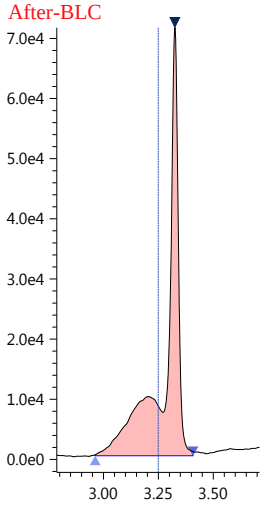
Conc 4.7810
RT 3.324 Area 2760044
Q 216.90>172.15 (-) 7.18e5



PFBA

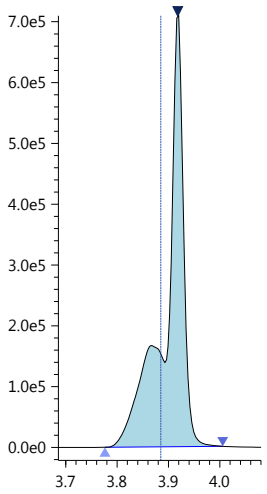
Conc 0.4917
RT 3.325 Area 269879
Q 213.00>169.10 (-) 7.18e4

After-BLC



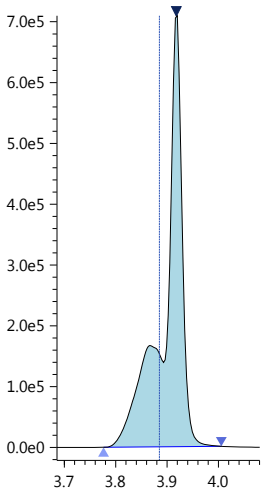
PFPeA-13C_IS

Conc 5.0000
RT 3.918 Area 1701662
ISTD 267.90>223.00 (-) 7.10e5



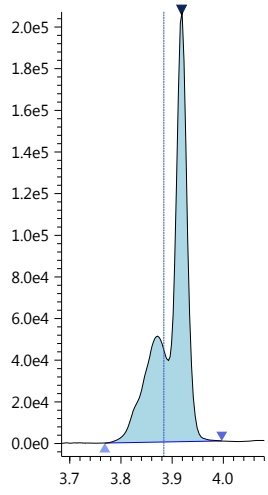
PFPeA-13C

Conc 4.8411
RT 3.918 Area 1701662
Q 267.90>223.00 (-) 7.10e5



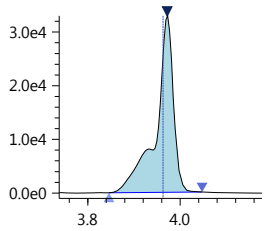
PFPeA

Conc 0.4866
RT 3.918 Area 490696
Q 263.05>219.10 (-) 2.07e5

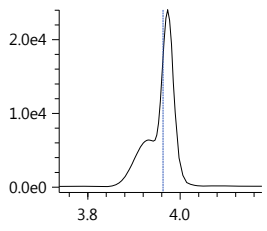


PFBS_1

Conc 0.4203
RT 3.972 Area 86098
R#1 69.56 (0.00)
Q 299.00>80.00 (-) 3.30e4

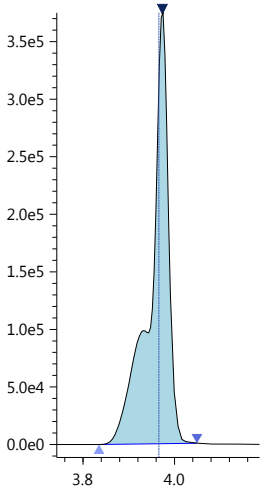


R1 298.80>99.00 (-) 2.40e4



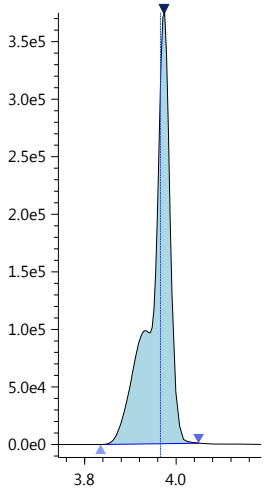
PFBS-13C

Conc 4.8433
RT 3.973 Area 1018210
Q 301.80>80.00 (-) 3.75e5



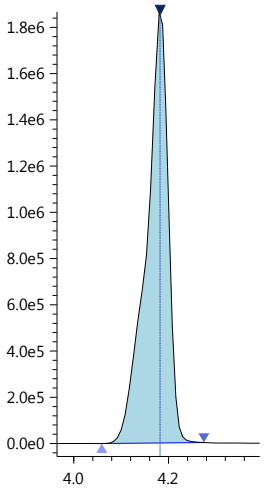
PFBS-13C_IS

Conc 5.0000
RT 3.973 Area 1018210
ISTD 301.80>80.00 (-) 3.75e5



PFHxA-13C_IS

Conc 5.0000
RT 4.182 Area 5960695
ISTD 314.90>270.10 (-) 1.87e6



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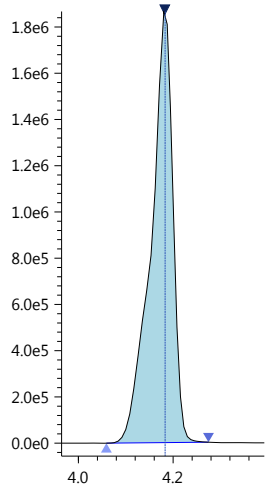
PFHxA-13C

Conc 4.9840
RT 4.182 Area 5960695

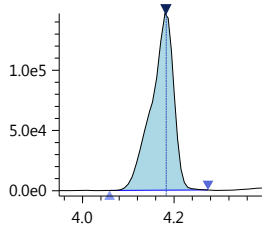
Q 314.90>270.10 (-) 1.87e6



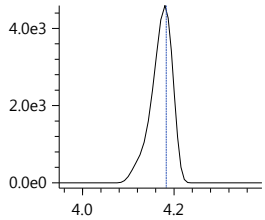
PFHxA

Conc 0.4520
RT 4.182 Area 497234
R#1 3.18 (0.00)

Q 313.00>269.00 (-) 1.47e5



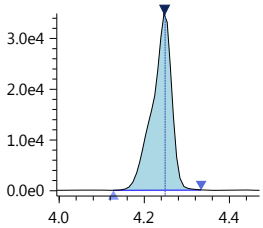
R1 313.00>119.10 (-) 4.59e3



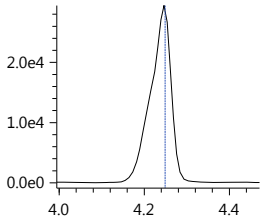
HPFO_DA

Conc 0.4894
RT 4.248 Area 109994
R#1 84.36 (0.00)

Q 329.00>169.00 (-) 3.49e4



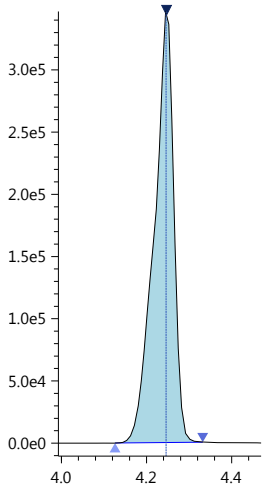
R1 329.00>285.10 (-) 2.94e4



HFPO_DA-13C_IS

Conc 5.0000
RT 4.247 Area 1107751

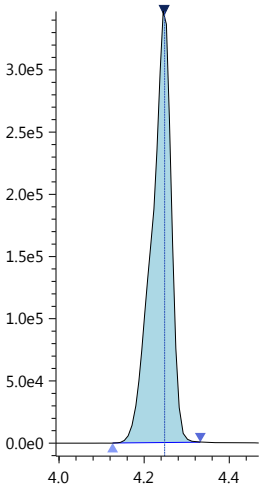
ISTD 332.00>286.80 (-) 3.47e5



HFPO_DA-13C

Conc 4.9361
RT 4.247 Area 1107751

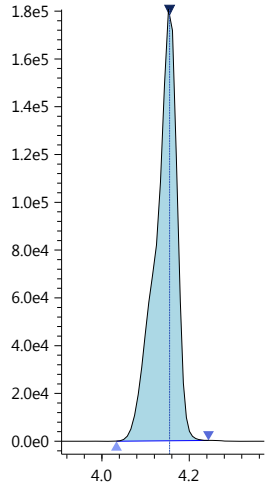
Q 332.00>286.80 (-) 3.47e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.155 Area 607956

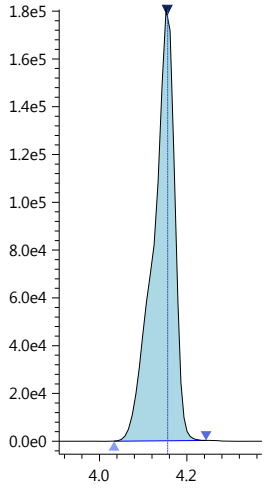
ISTD 328.80>309.05 (-) 1.81e5



4_2-FTS-13C

Conc 5.0733
RT 4.155 Area 607956

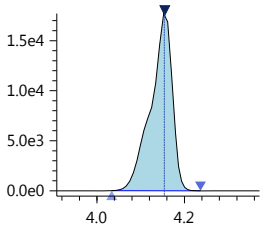
Q 328.80>309.05 (-) 1.81e5



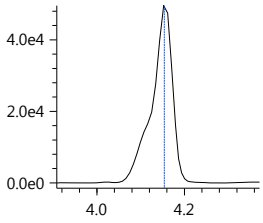
4_2-FTS_1

Conc 0.5137
RT 4.155 Area 60238
R#1 278.64 (0.00)

Q 327.00>307.05 (-) 1.77e4



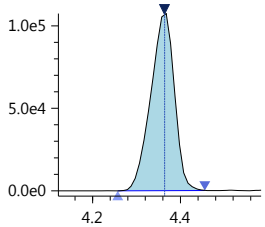
R1 327.00>81.10 (-) 4.96e4



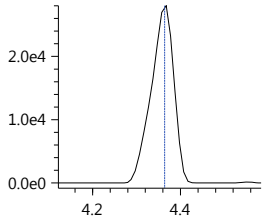
PFHpA

Conc 0.4935
RT 4.363 Area 403979
R#1 26.05 (0.00)

Q 362.90>319.00 (-) 1.07e5



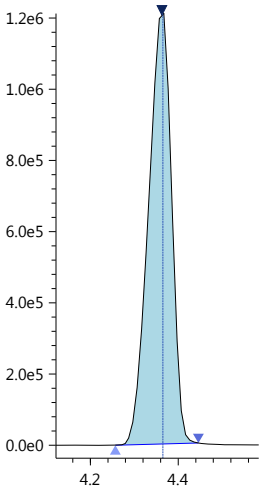
R1 362.90>169.00 (-) 2.80e4



PFHpA-13C_IS

Conc 5.0000
RT 4.363 Area 4437074

ISTD 366.90>322.10 (-) 1.21e6



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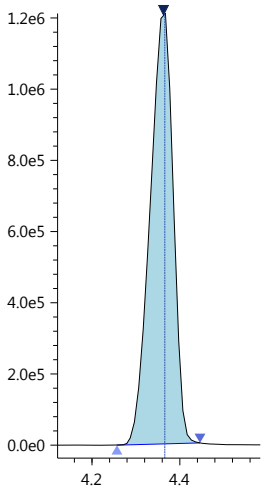
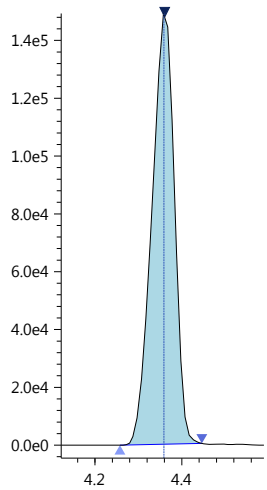
PFHpA-13C
Conc 4.5163
RT 4.363 Area 4437074

Q 366.90>322.10 (-) 1.21e6



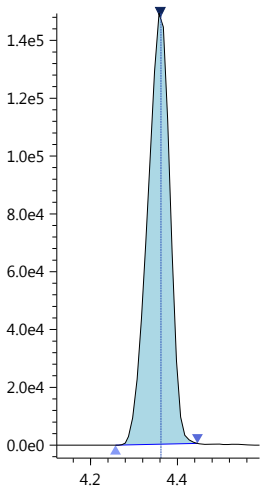
PFHxS-18O_IS
Conc 5.0000
RT 4.361 Area 538506

ISTD 402.70>84.05 (-) 1.49e5



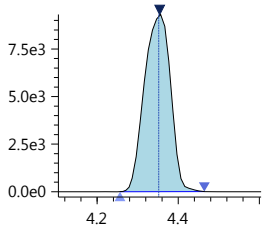
PFHxS-18O
Conc 4.5251
RT 4.361 Area 538506

Q 402.70>84.05 (-) 1.49e5

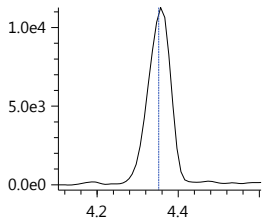


PFHxS_1
Conc 0.3929
RT 4.354 Area 42036
R#1 118.99 (0.00)

Q 399.00>80.00 (-) 9.31e3

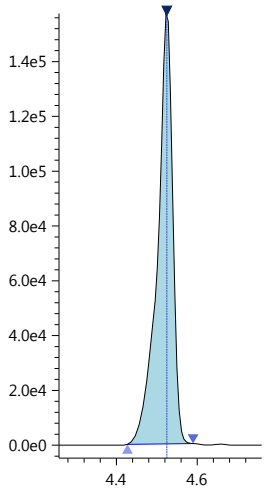


R1 399.00>99.00 (-) 1.13e4



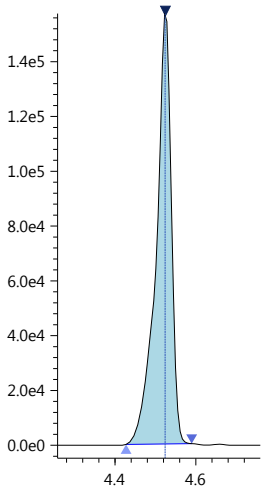
6_2-FTS-13C
Conc 4.8569
RT 4.525 Area 409456

Q 428.90>409.00 (-) 1.58e5



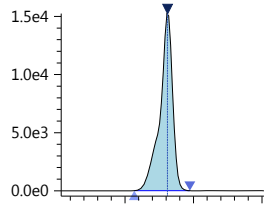
6_2-FTS-13C_IS
Conc 5.0000
RT 4.525 Area 409456

ISTD 428.90>409.00 (-) 1.58e5

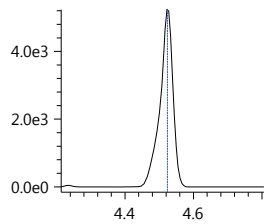


6_2-FTS_1
Conc 0.4845
RT 4.525 Area 39245
R#1 33.94 (0.00)

Q 427.00>407.00 (-) 1.53e4

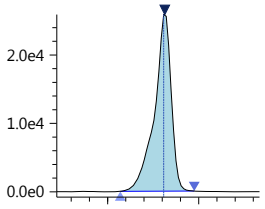


R1 427.00>80.90 (-) 5.23e3

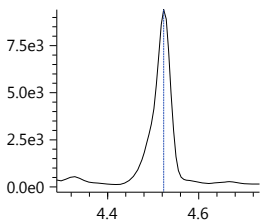


PFHpS_1
Conc 0.5128
RT 4.526 Area 66078
R#1 35.62 (0.00)

Q 449.00>80.15 (-) 2.59e4

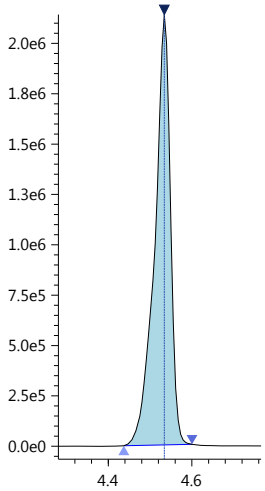


R1 449.00>99.20 (-) 9.41e3



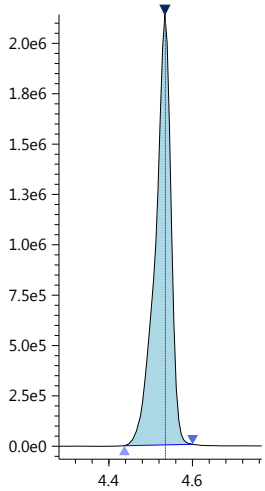
PFOA-13C_IS
Conc 5.0000
RT 4.534 Area 5559738

ISTD 416.80>372.05 (-) 2.14e6



PFOA-13C
Conc 4.9670
RT 4.534 Area 5559738

Q 416.80>372.05 (-) 2.14e6



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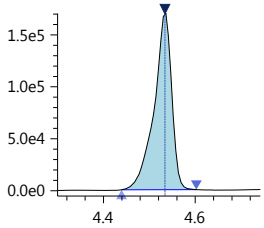
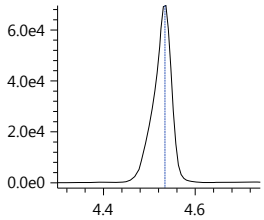
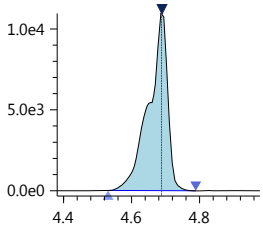
PFOA
Conc 0.4752
RT 4.534 Area 451317
R#1 40.78 (0.00)
Q 413.00>369.00 (-) 1.71e5



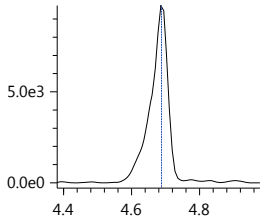
R1 413.00>169.10 (-) 6.96e4



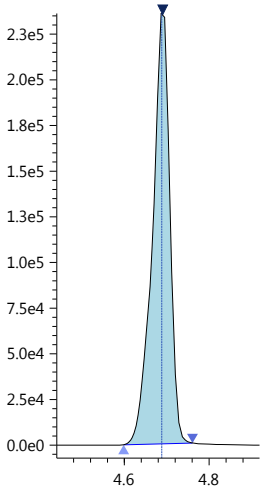
PFOS_1
Conc 0.4382
RT 4.690 Area 42289
R#1 88.36 (0.00)
Q 499.00>80.00 (-) 1.10e4



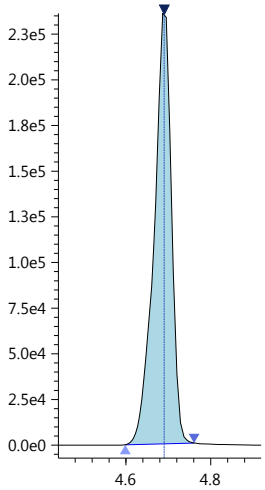
R1 499.00>99.00 (-) 9.74e3



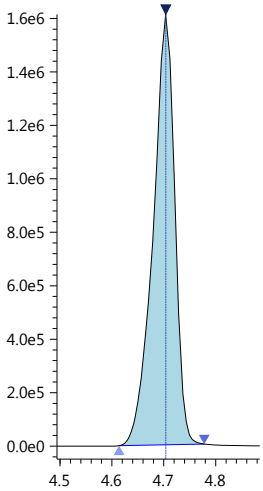
PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 674021
ISTD 502.80>80.05 (-) 2.36e5



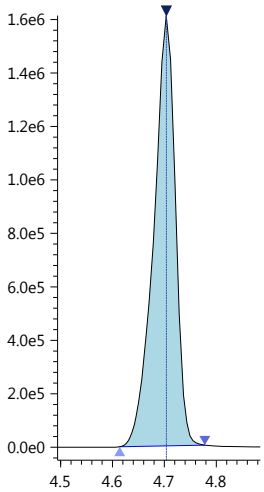
PFOS-13C
Conc 5.0234
RT 4.691 Area 674021
Q 502.80>80.05 (-) 2.36e5



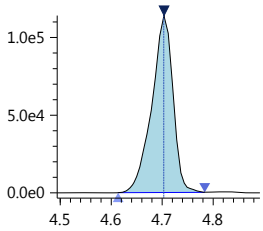
PFNA-13C_IS
Conc 5.0000
RT 4.704 Area 4671864
ISTD 467.80>423.00 (-) 1.61e6



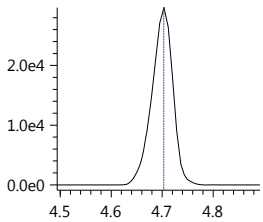
PFNA-13C
Conc 4.8392
RT 4.704 Area 4671864
Q 467.80>423.00 (-) 1.61e6



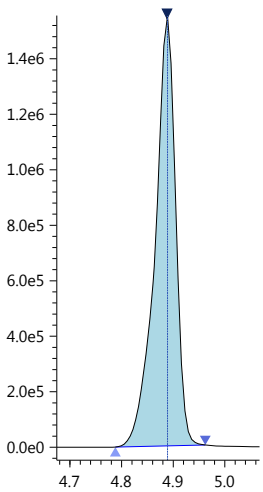
PFNA
Conc 0.5015
RT 4.704 Area 328238
R#1 26.06 (0.00)
Q 463.00>418.90 (-) 1.14e5



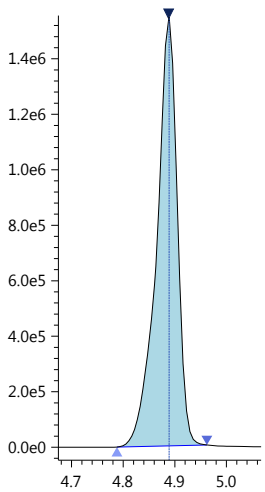
R1 463.00>219.00 (-) 2.97e4



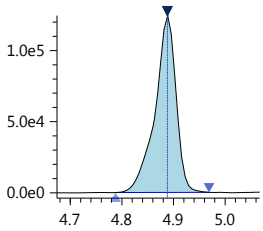
PFDA-13C_IS
Conc 5.0000
RT 4.888 Area 4285878
ISTD 514.80>469.95 (-) 1.56e6



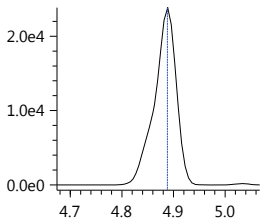
PFDA-13C
Conc 4.7915
RT 4.888 Area 4285878
Q 514.80>469.95 (-) 1.56e6



PFDA
Conc 0.4834
RT 4.888 Area 350082
R#1 19.11 (0.00)
Q 513.00>468.80 (-) 1.25e5



R1 513.00>219.10 (-) 2.38e4



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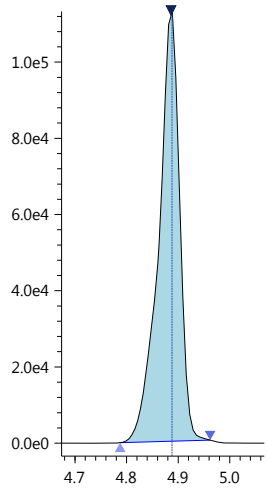
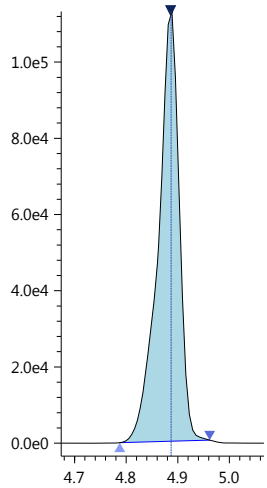
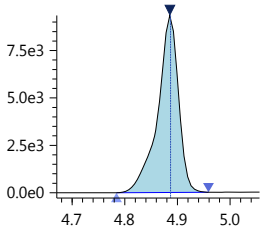
8_2-FTS-13C_IS
Conc 5.0000
RT 4.886 Area 317818
ISTD 528.80>509.00 (-) 1.13e5



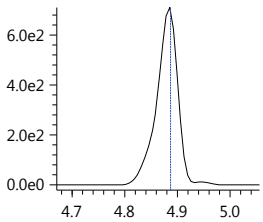
8_2-FTS-13C
Conc 4.7819
RT 4.886 Area 317818
Q 528.80>509.00 (-) 1.13e5



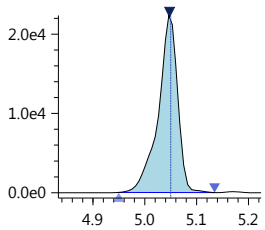
8_2-FTS_1
Conc 0.5058
RT 4.886 Area 25529
R#1 7.54 (0.00)
Q 527.10>506.90 (-) 9.35e3



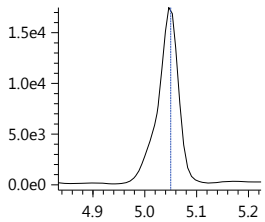
R1 527.20>487.00 (-) 7.10e2



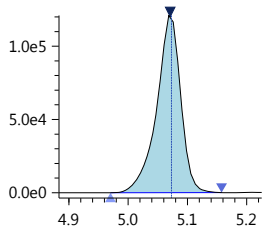
PFDS_1
Conc 0.4994
RT 5.048 Area 58077
R#1 77.12 (0.00)
Q 599.00>79.90 (-) 2.24e4



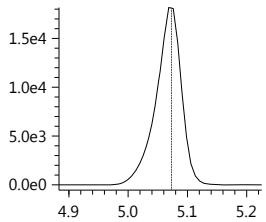
R1 599.00>99.10 (-) 1.75e4



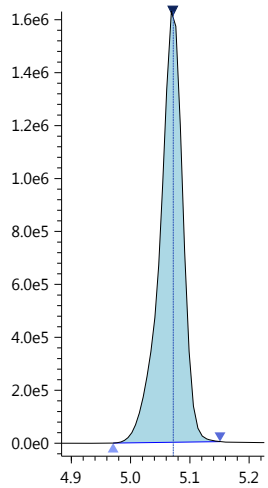
PFUnA
Conc 0.4740
RT 5.071 Area 340640
R#1 14.90 (0.00)
Q 563.00>518.90 (-) 1.21e5



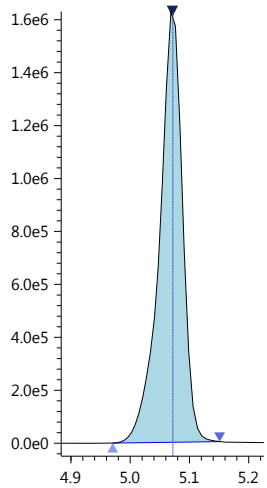
R1 563.00>219.00 (-) 1.82e4



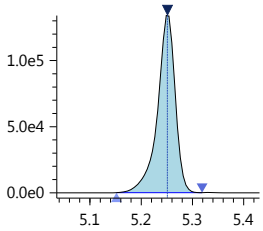
PFUnA-13C_IS
Conc 5.0000
RT 5.071 Area 4397434
ISTD 564.80>519.95 (-) 1.63e6



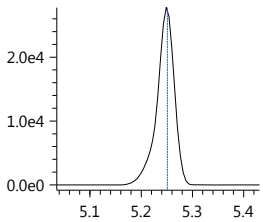
PFUnA-13C
Conc 5.0546
RT 5.071 Area 4397434
Q 564.80>519.95 (-) 1.63e6



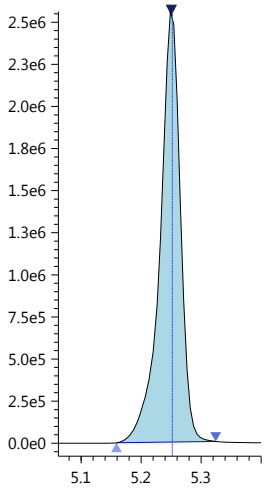
PFDoA
Conc 0.4983
RT 5.251 Area 323657
R#1 20.93 (0.00)
Q 613.05>569.00 (-) 1.34e5



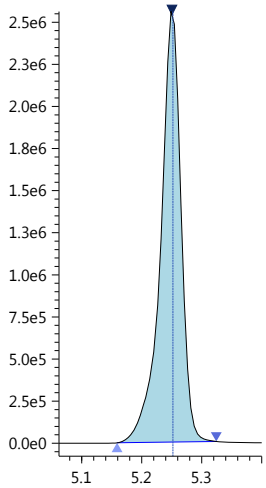
R1 613.05>169.00 (-) 2.78e4



PFDoA-13C
Conc 5.0733
RT 5.250 Area 6032973
Q 614.80>569.95 (-) 2.56e6



PFDoA-13C_IS
Conc 5.0000
RT 5.250 Area 6032973
ISTD 614.80>569.95 (-) 2.56e6



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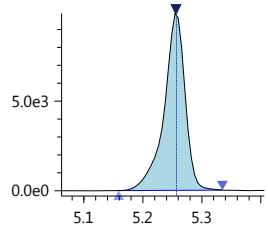
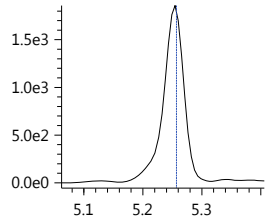
10_2-FtS_1

Conc 0.5257
RT 5.256 Area 24422
R#1 18.64 (0.00)

Q 627.00>606.95 (-) 9.89e3



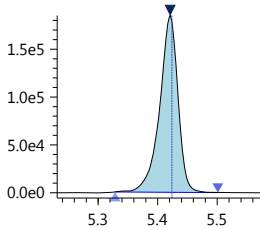
R1 627.00>81.25 (-) 1.86e3



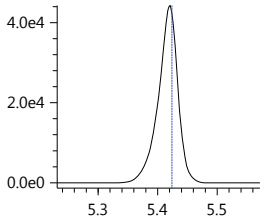
PFTrDA

Conc 0.4974
RT 5.421 Area 396321
R#1 23.92 (0.00)

Q 663.00>618.90 (-) 1.85e5



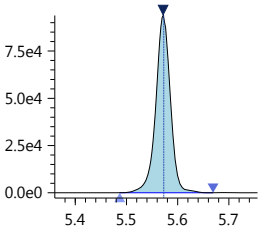
R1 662.90>169.00 (-) 4.43e4



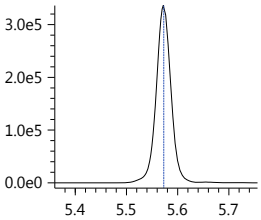
PFTeDA

Conc 0.4977
RT 5.572 Area 185871
R#1 348.98 (0.00)

Q 713.40>669.00 (-) 9.38e4



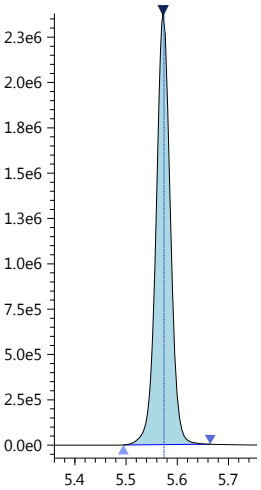
R1 713.40>169.10 (-) 3.36e5



PFTeDA-13C

Conc 4.9295
RT 5.572 Area 4617519

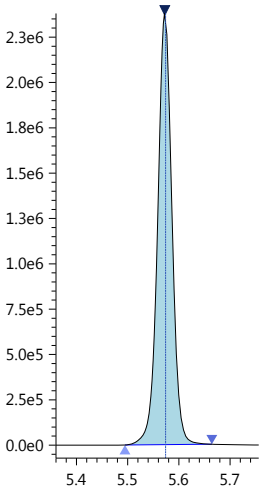
Q 714.70>669.90 (-) 2.38e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.572 Area 4617519

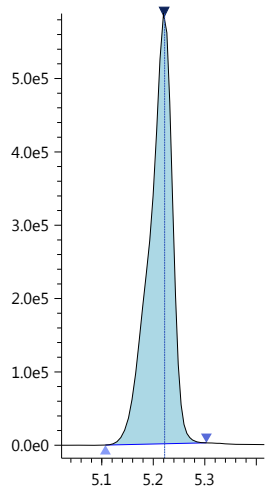
ISTD 714.70>669.90 (-) 2.38e6



FOSA-13C_IS

Conc 5.0000
RT 5.221 Area 1800927

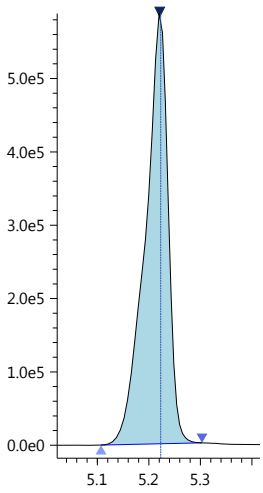
ISTD 506.00>78.05 (-) 5.89e5



FOSA-13C

Conc 4.8387
RT 5.221 Area 1800927

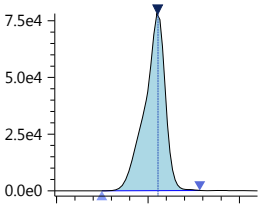
Q 506.00>78.05 (-) 5.89e5



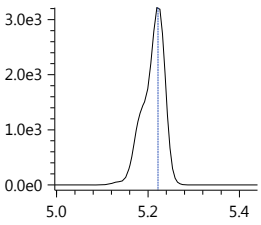
FOSA

Conc 0.5036
RT 5.221 Area 242874
R#1 4.12 (0.00)

Q 498.20>78.00 (-) 7.82e4



R1 498.20>64.10 (-) 3.22e3

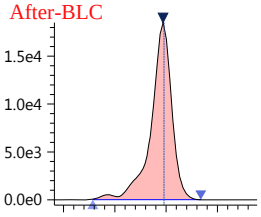


N-MeFOSAA

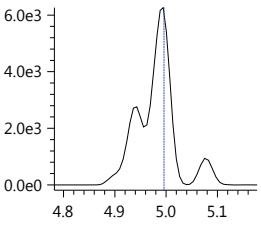
Conc 0.4347
RT 4.994 Area 51226
R#1 31.35 (0.00)

Q 570.20>419.00 (-) 1.85e4

After-BLC



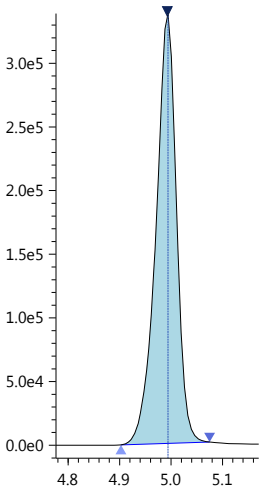
R1 570.20>512.00 (-) 6.26e3



N-MeFOSAA-d3

Conc 4.7199
RT 4.993 Area 935958

Q 572.80>419.05 (-) 3.39e5



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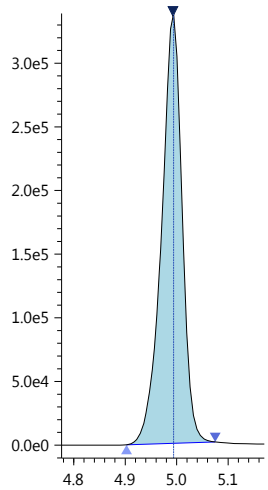
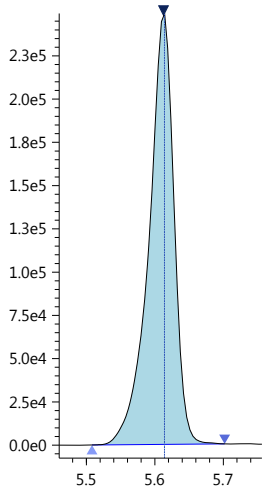
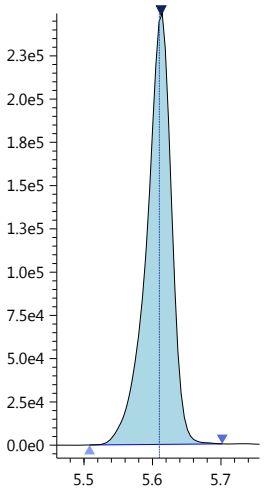
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.993 Area 935958
ISTD 572.80>419.05 (-) 3.39e5



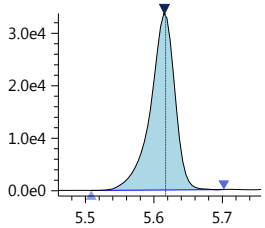
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.613 Area 634569
ISTD 514.90>168.90 (-) 2.49e5



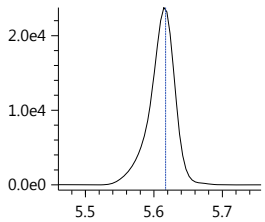
N-MeFOSA-d3
Conc 4.8299
RT 5.613 Area 634569
Q 514.90>168.90 (-) 2.49e5



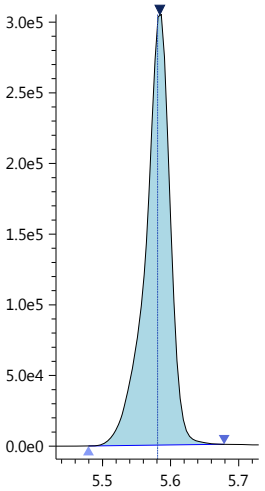
N-MeFOSA
Conc 0.5140
RT 5.616 Area 83377
R#1 70.63 (0.00)
Q 512.00>169.10 (-) 3.38e4



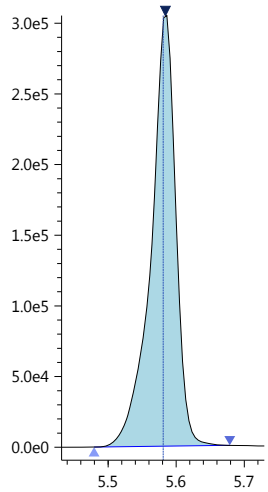
R1 512.00>219.00 (-) 2.38e4



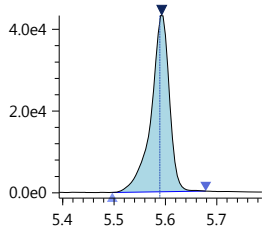
N-MeFOSE-d7
Conc 4.8545
RT 5.584 Area 771678
Q 622.70>59.10 (-) 3.05e5



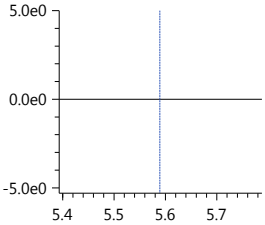
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.584 Area 771678
ISTD 622.70>59.10 (-) 3.05e5



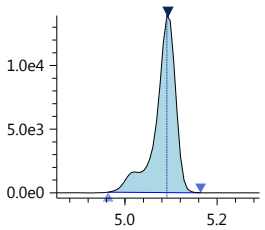
N-MeFOSE
Conc 0.5012
RT 5.593 Area 106426
R#1 0.00 (0.00)
Q 616.00>59.00 (-) 4.34e4



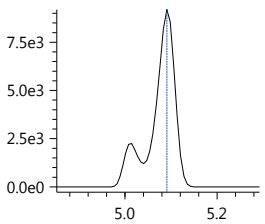
R1 556.00>121.20 (-) 0.00e0



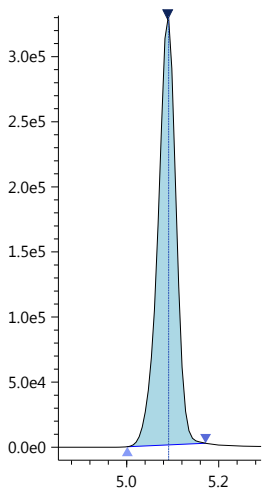
N-EtFOSAA
Conc 0.4533
RT 5.093 Area 41290
R#1 66.10 (0.00)
Q 584.20>418.95 (-) 1.39e4



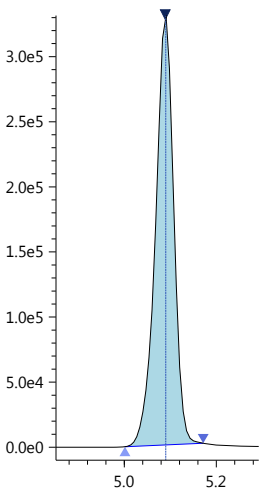
R1 584.20>526.10 (-) 9.19e3



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.089 Area 908510
ISTD 588.80>419.00 (-) 3.32e5



N-EtFOSAA-d5
Conc 4.7730
RT 5.089 Area 908510
Q 588.80>419.00 (-) 3.32e5



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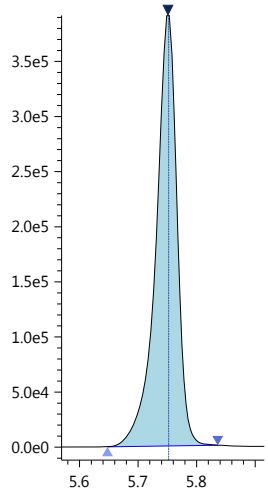
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.751 Area 981756

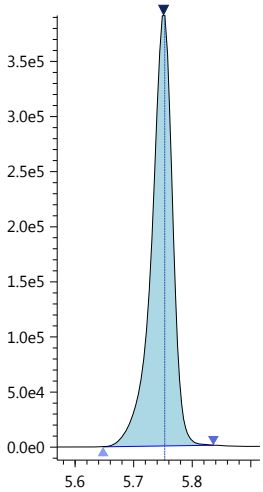
ISTD 530.90>169.15 (-) 3.92e5



N-EtFOSA-d9

Conc 4.7856
RT 5.751 Area 981756

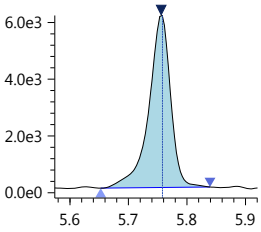
Q 530.90>169.15 (-) 3.92e5



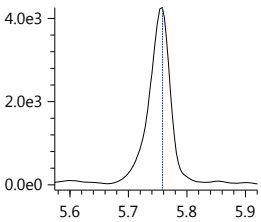
N-EtFOSA

Conc 0.5020
RT 5.756 Area 15754
R#1 69.46 (0.00)

Q 526.90>169.10 (-) 6.25e3



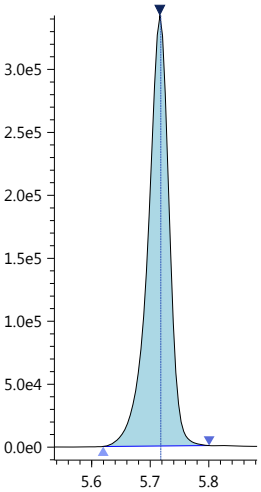
R1 526.90>219.00 (-) 4.26e3



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.716 Area 860963

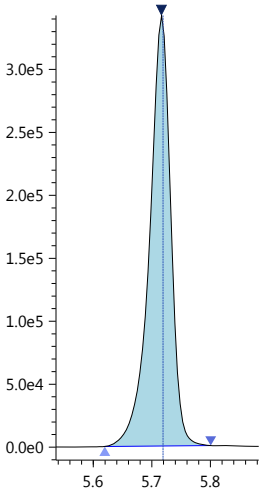
ISTD 638.70>59.10 (-) 3.43e5



N-EtFOSE-d9

Conc 4.9133
RT 5.716 Area 860963

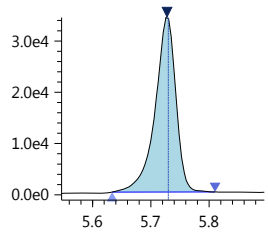
Q 638.70>59.10 (-) 3.43e5



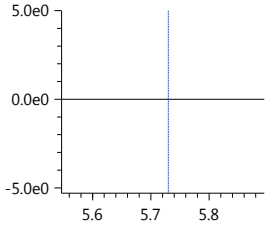
N-EtFOSE

Conc 0.4785
RT 5.728 Area 84665
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 3.46e4



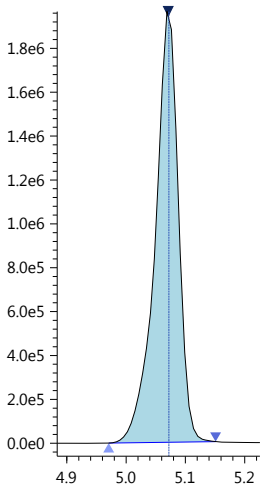
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.071 Area 5348302

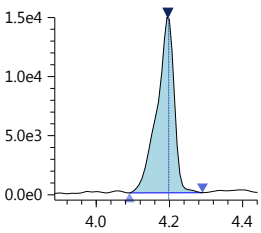
ISTD 570.00>525.00 (-) 1.97e6



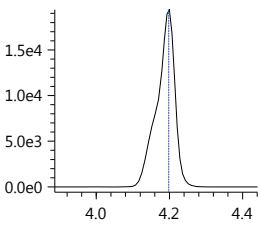
PFPeS

Conc 0.5136
RT 4.196 Area 48856
R#1 126.50 (0.00)

Q 349.00>99.00 (-) 1.50e4



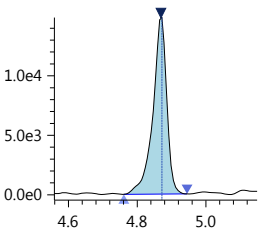
R1 349.00>79.95 (-) 1.94e4



PFNS

Conc 0.5182
RT 4.869 Area 41636
R#1 109.35 (0.00)

Q 549.00>99.00 (-) 1.49e4



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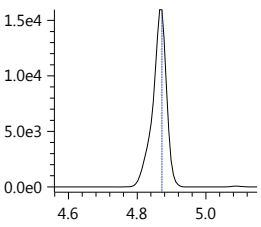

Insight Report

Printed at 1/21/2019 9:31:25 AM

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Date acquired: 1/18/2019 6:08:09 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_025.lcd
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Conc 5.0000
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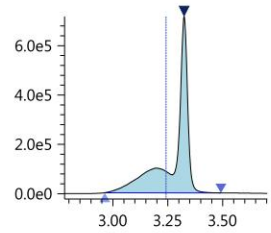

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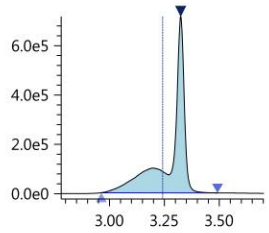
Q 216.90>172.15 (-) 7.18e5



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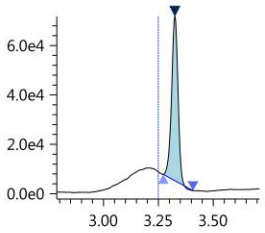
Conc 0.0506
RT 3.325 Area 133952
Q 213.00>169.10 (-) 7.18e4



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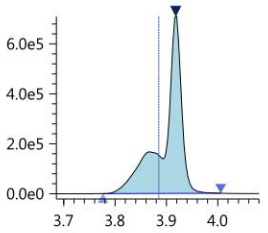
RT 3.918 Area 1701662
ISTD 267.90>223.00 (-) 7.10e5



PFPeA-13C
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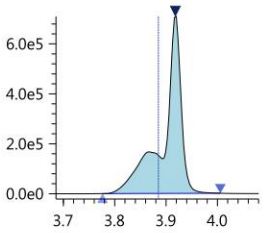
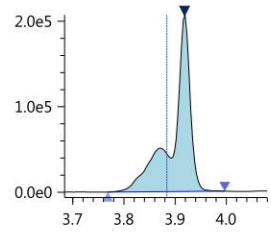
Q 267.90>223.00 (-) 7.10e5



PFPeA
Conc 0.1252
RT 3.918 Area 490696
Q 263.05>219.10 (-) 2.07e5



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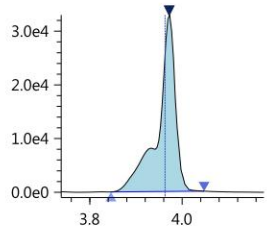
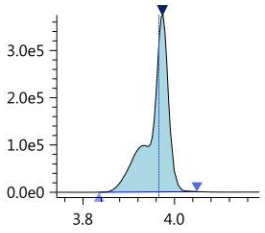
Conc 0.0919
RT 3.972 Area 86098
Q 299.00>80.00 (-) 3.30e4



PFBS-13C
Conc 4.8433
RT 3.973 Area 1018210
Q 301.80>80.00 (-) 3.75e5



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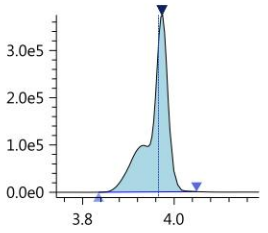

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RT 4.182 Area 5960695
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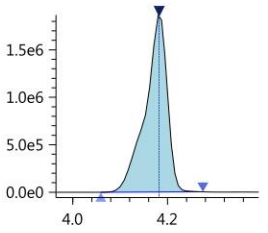

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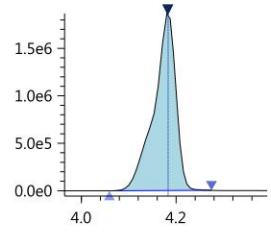
RT 4.182 Area 5960695
Q 314.90>270.10 (-) 1.87e6



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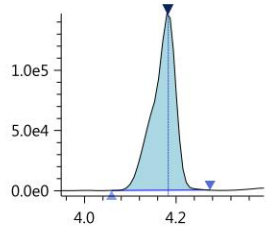
Conc 0.0996
RT 4.182 Area 497234
Q 313.00>269.00 (-) 1.47e5



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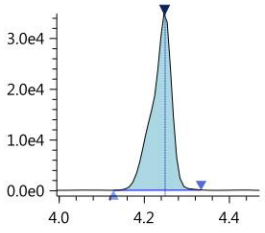
Conc 0.1036
RT 4.248 Area 109994
Q 329.00>169.00 (-) 3.49e4



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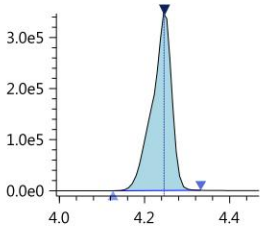
RT 4.247 Area 1107751
ISTD 332.00>286.80 (-) 3.47e5



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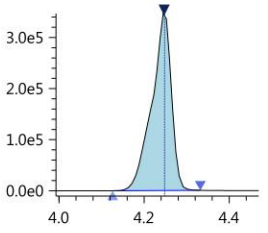
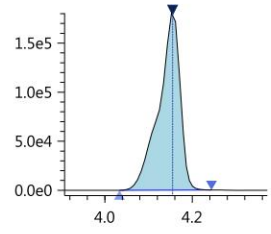
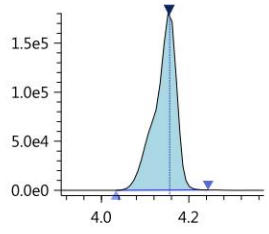
Q 332.00>286.80 (-) 3.47e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 607956
ISTD 328.80>309.05 (-) 1.81e5



4_2-FTS-13C
Conc 5.0733
RT 4.155 Area 607956
Q 328.80>309.05 (-) 1.81e5



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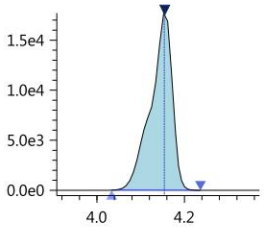
Q 327.00>307.05 (-) 1.77e4



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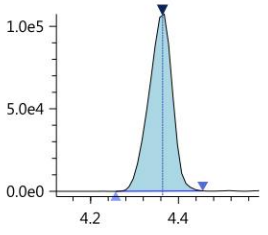
Q 362.90>319.00 (-) 1.07e5



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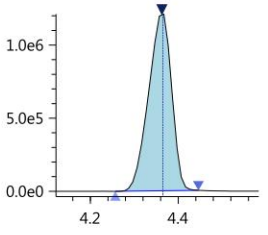
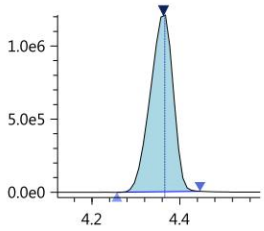
RT 4.363 Area 4437074
ISTD 366.90>322.10 (-) 1.21e6



Insight Report

Printed at 1/21/2019 9:31:25 AM

PFHpA-13C
Conc 4.5163
RT 4.363 Area 4437074
Q 366.90>322.10 (-) 1.21e6



PFHxS-18O_IS
Conc 5.0000
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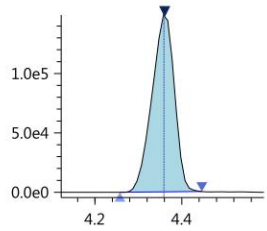

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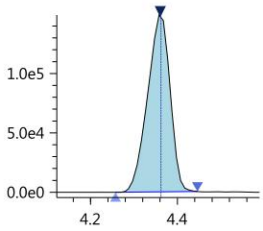

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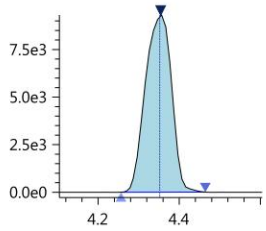
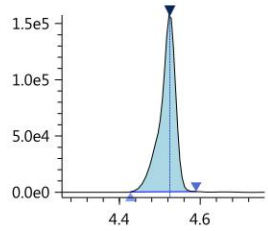
Conc 0.0868
RT 4.354 Area 42036
Q 399.00>80.00 (-) 9.31e3



6_2-FTS-13C
Conc 4.8569
RT 4.525 Area 409456
Q 428.90>409.00 (-) 1.58e5



6_2-FTS-13C_IS
Conc 5.0000
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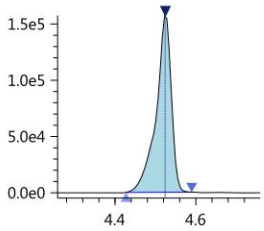
ISTD 428.90>409.00 (-) 1.58e5



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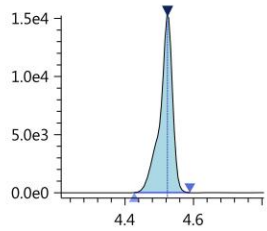
Conc 0.1154
RT 4.525 Area 39245
Q 427.00>407.00 (-) 1.53e4



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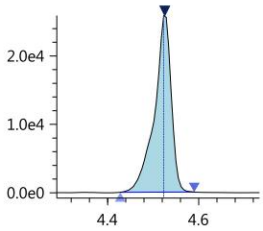
Conc 0.1092
RT 4.526 Area 66078
Q 449.00>80.15 (-) 2.59e4



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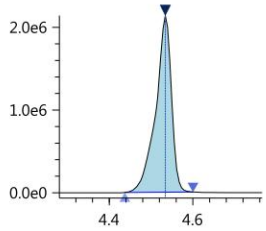
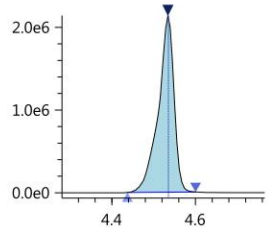
RT 4.534 Area 5559738
ISTD 416.80>372.05 (-) 2.14e6



PFOA-13C
Conc 4.9670
RT 4.534 Area 5559738
Q 416.80>372.05 (-) 2.14e6



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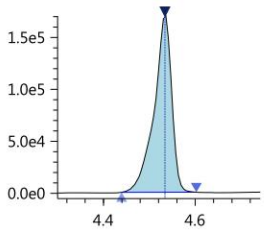
Q 413.00>369.00 (-) 1.71e5



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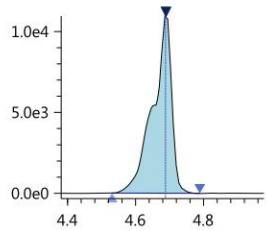
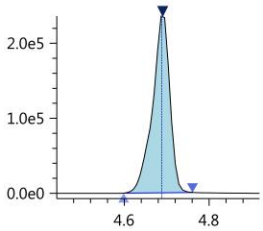
RT 4.690 Area 42289
Q 499.00>80.00 (-) 1.10e4



PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 674021
ISTD 502.80>80.05 (-) 2.36e5



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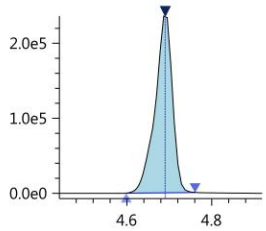
Conc 5.0234
RT 4.691 Area 674021
Q 502.80>80.05 (-) 2.36e5



PFNA-13C_IS
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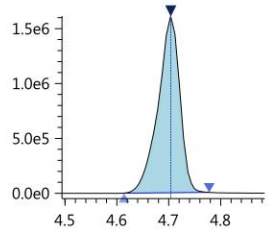
RT 4.704 Area 4671864
ISTD 467.80>423.00 (-) 1.61e6



PFNA-13C
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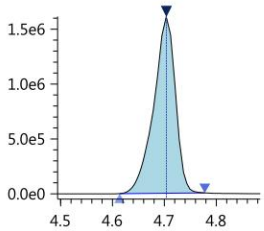
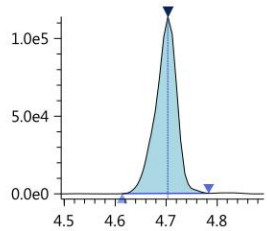
Q 467.80>423.00 (-) 1.61e6



PFNA
Conc 0.1074
RT 4.704 Area 328238
Q 463.00>418.90 (-) 1.14e5



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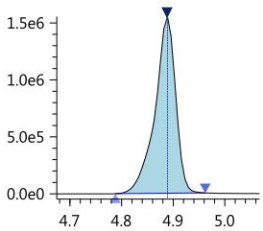
Conc 5.0000
RT 4.888 Area 4285878
ISTD 514.80>469.95 (-) 1.56e6



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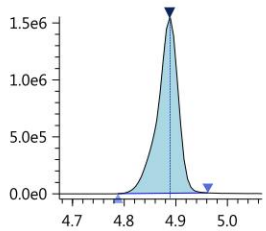
RT 4.888 Area 4285878
Q 514.80>469.95 (-) 1.56e6



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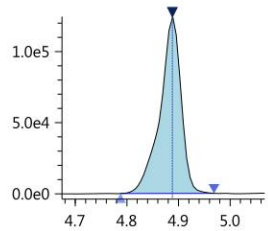
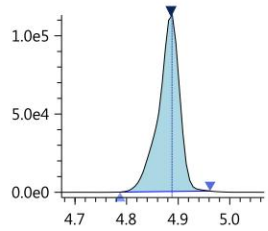
Conc 0.1062
RT 4.888 Area 350082
Q 513.00>468.80 (-) 1.25e5



Insight Report

Printed at 1/21/2019 9:31:25 AM

8_2-FTS-13C_IS
Conc 5.0000
RT 4.886 Area 317818
ISTD 528.80>509.00 (-) 1.13e5



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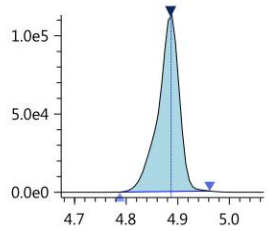
Q 528.80>509.00 (-) 1.13e5



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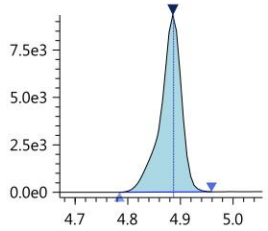
Q 527.10>506.90 (-) 9.35e3



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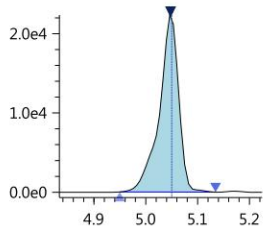

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Conc 0.1059
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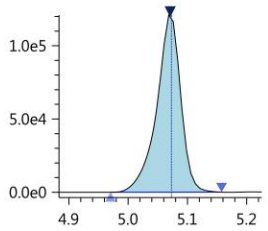
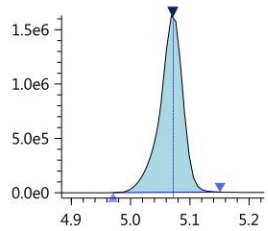


PFUnA-13C_IS
Conc 5.0000
RT 5.071 Area 4397434
ISTD 564.80>519.95 (-) 1.63e6



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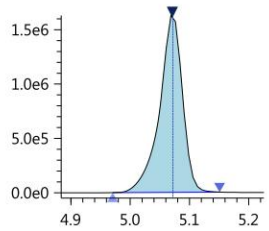

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RT 5.251 Area 323657
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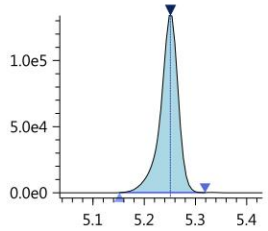
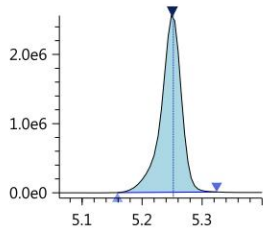


PFDoA-13C
Conc 5.0733
RT 5.250 Area 6032973
Q 614.80>569.95 (-) 2.56e6



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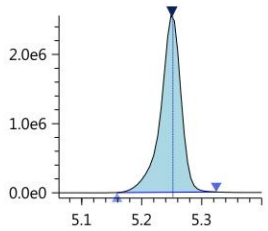
RT 5.250 Area 6032973
ISTD 614.80>569.95 (-) 2.56e6



10_2-FtS_1
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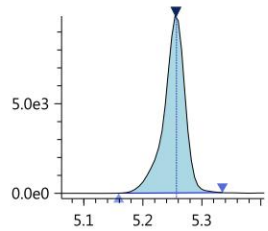
Q 627.00>606.95 (-) 9.89e3



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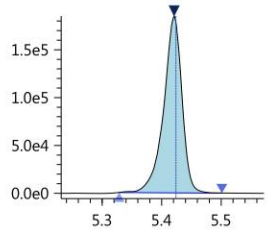

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Conc 0.1283
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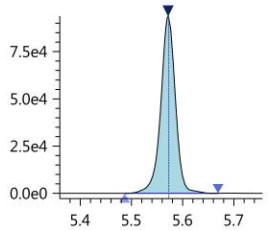
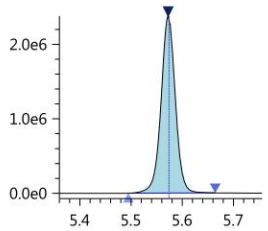
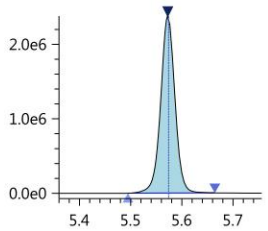
Q 713.40>669.00 (-) 9.38e4



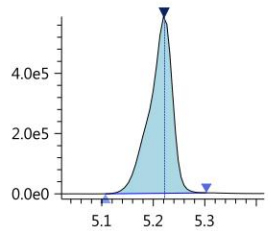
PFTeDA-13C
Conc 4.9295
RT 5.572 Area 4617519
Q 714.70>669.90 (-) 2.38e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.572 Area 4617519
ISTD 714.70>669.90 (-) 2.38e6



FOSA-13C_IS
Conc 5.0000
RT 5.221 Area 1800927
ISTD 506.00>78.05 (-) 5.89e5



FOSA-13C
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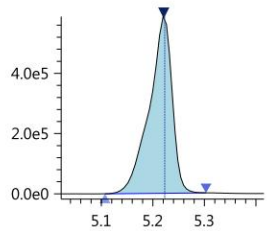
Q 506.00>78.05 (-) 5.89e5



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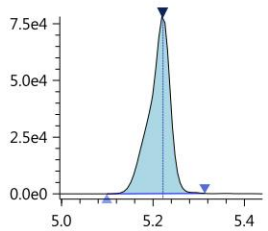
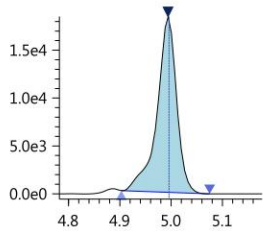
RT 5.221 Area 242874
Q 498.20>78.00 (-) 7.82e4



N-MeFOSAA
Conc 0.0947
RT 4.994 Area 48753
Q 570.20>419.00 (-) 1.85e4



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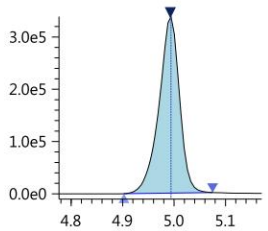
Conc 4.7199
RT 4.993 Area 935958
Q 572.80>419.05 (-) 3.39e5



Insight Report

N-MeFOSAA-d3_IS
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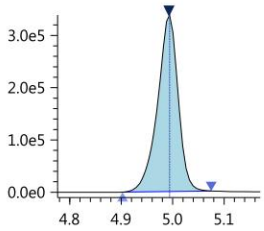
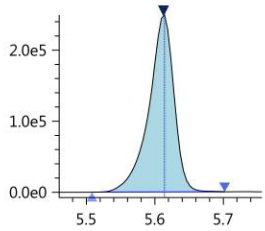
RT 4.993 Area 935958
ISTD 572.80>419.05 (-) 3.39e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.613 Area 634569
ISTD 514.90>168.90 (-) 2.49e5



N-MeFOSA-d3
Conc 4.8299
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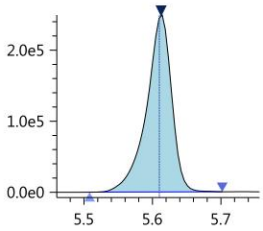
Q 514.90>168.90 (-) 2.49e5



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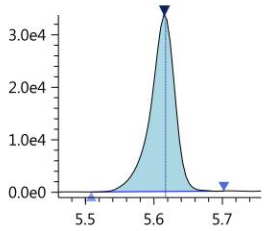
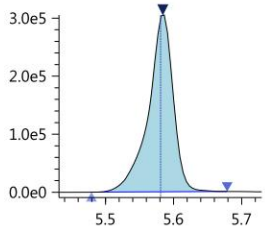
Conc 0.1130
RT 5.616 Area 83377
Q 512.00>169.10 (-) 3.38e4



N-MeFOSE-d7
Conc 4.8545
RT 5.584 Area 771678
Q 622.70>59.10 (-) 3.05e5



N-MeFOSE-d7_IS
Conc 5.0000
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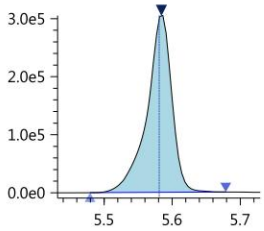
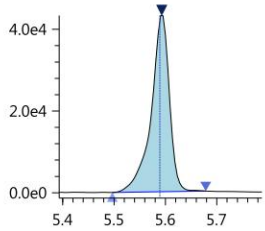
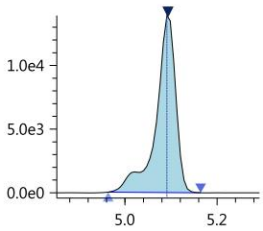
ISTD 622.70>59.10 (-) 3.05e5



N-MeFOSE
Conc 0.1085
RT 5.593 Area 106426
Q 616.00>59.00 (-) 4.34e4



N-EtFOSAA
Conc 0.0979
RT 5.093 Area 41290
Q 584.20>418.95 (-) 1.39e4



N-EtFOSAA-d5_IS
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RT 5.089 Area 908510
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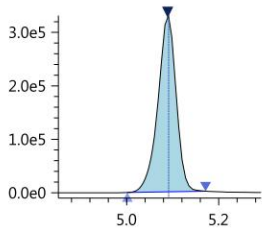

N-EtFOSAA-d5
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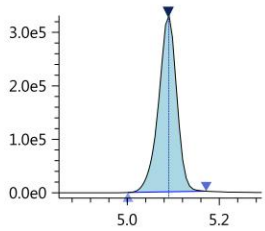
Q 588.80>419.00 (-) 3.32e5



N-EtFOSA-d9_IS
Conc 5.0000
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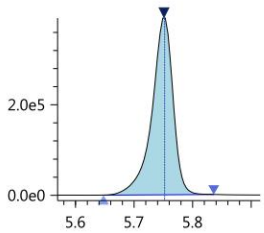
ISTD 530.90>169.15 (-) 3.92e5



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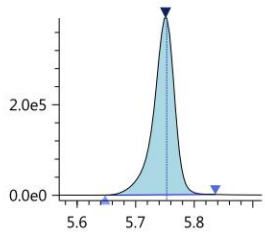
Q 530.90>169.15 (-) 3.92e5



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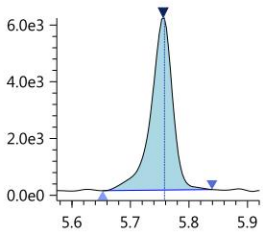
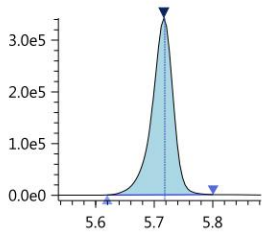
Q 526.90>169.10 (-) 6.25e3



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.716 Area 860963
ISTD 638.70>59.10 (-) 3.43e5



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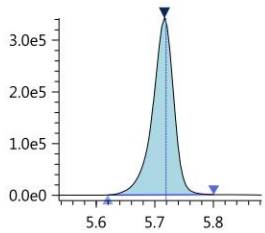

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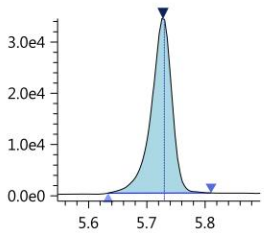
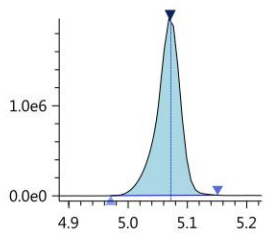
Q 630.00>58.90 (-) 3.46e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.071 Area 5348302
ISTD 570.00>525.00 (-) 1.97e6



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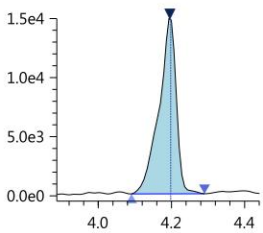
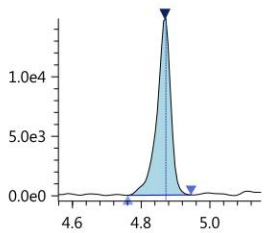
RT 4.196 Area 48856
Q 349.00>99.00 (-) 1.50e4



PFNS
Conc 0.1154
RT 4.869 Area 41636
Q 549.00>99.00 (-) 1.49e4



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_026

Sample ID: 1.0 PPB ICAL
Date acquired: 1/18/2019 6:18:33 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_026.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.324	2802895	2802895	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.324	2802895	5364058	26	4.8409	ng/mL	5.0000
PFBA	M	3.325	541569	2802895	2	0.9715	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.918	1718269	1718269	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.918	1718269	5364058	26	4.8740	ng/mL	5.0000
PFPeA	Auto	3.919	893874	1718269	4	0.9509	ng/mL	1.0000
PFBS_1	Auto	3.972	180198	1033801	16	0.8664	ng/mL	0.8874
PFBS-13C	Auto	3.974	1033801	5364058	26	4.9030	ng/mL	5.0000
PFBS-13C_IS	Auto	3.974	1033801	1033801	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.183	5894002	5894002	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.183	5894002	5364058	26	4.9138	ng/mL	5.0000
PFHxA	Auto	4.182	1043126	5894002	6	0.9569	ng/mL	1.0000
HPFO_DA	Auto	4.248	217713	1100105	3	0.9754	ng/mL	1.0000
HFPO_DA-13C_IS	Auto	4.247	1100105	1100105	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.247	1100105	5364058	26	4.8876	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.155	613852	613852	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.155	613852	5364058	26	5.1074	ng/mL	5.0000
4_2-FTS_1	Auto	4.155	111965	613852	5	0.9456	ng/mL	0.9372
PFHpA	Auto	4.363	814722	4531038	8	0.9661	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.364	4531038	4531038	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.364	4531038	5364058	26	4.5984	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.361	533442	533442	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.361	533442	5364058	26	4.4693	ng/mL	5.0000
PFHxS_1	Auto	4.352	95283	533442	7	0.8989	ng/mL	0.9131
6_2-FTS-13C	Auto	4.525	419765	5364058	26	4.9646	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.525	419765	419765	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.524	80734	419765	10	0.9721	ng/mL	0.9512
PFHpS_1	Auto	4.526	133519	533442	7	1.0460	ng/mL	0.9534
PFOA-13C_IS	Auto	4.534	5490594	5490594	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.534	5490594	5364058	26	4.8908	ng/mL	5.0000
PFOA	Auto	4.534	893586	5490594	9	0.9570	ng/mL	1.0000
PFOS_1	Auto	4.690	87413	670476	13	0.9106	ng/mL	0.9292
PFOS-13C_IS	Auto	4.690	670476	670476	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.690	670476	5364058	26	4.9823	ng/mL	5.0000
PFNA-13C_IS	Auto	4.703	4657436	4657436	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.703	4657436	5364058	26	4.8101	ng/mL	5.0000
PFNA	Auto	4.703	603449	4657436	11	0.9206	ng/mL	1.0000
PFDA-13C_IS	Auto	4.889	4357211	4357211	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.889	4357211	5364058	26	4.8570	ng/mL	5.0000
PFDA	Auto	4.889	686497	4357211	12	0.9324	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.887	326012	326012	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.887	326012	5364058	26	4.8907	ng/mL	5.0000
8_2-FTS_1	Auto	4.887	50239	326012	15	0.9705	ng/mL	0.9600
PFDS_1	Auto	5.050	109177	670476	13	0.9437	ng/mL	0.9647
PFUnA	Auto	5.073	677997	4395741	14	0.9490	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.072	4395741	4395741	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.072	4395741	5364058	26	5.0378	ng/mL	5.0000
PFDoA	Auto	5.252	625785	5943662	17	0.9754	ng/mL	1.0000
PFDoA-13C	Auto	5.252	5943662	5364058	26	4.9835	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.252	5943662	5943662	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.257	47981	326012	15	1.0068	ng/mL	0.9662
PFTrDA	Auto	5.422	800860	4572817	22	1.0114	ng/mL	1.0000
PFTeDA	Auto	5.574	322651	4572817	22	0.9435	ng/mL	1.0000
PFTeDA-13C	Auto	5.574	4572817	5364058	26	4.8674	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.574	4572817	4572817	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.222	1859370	1859370	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.222	1859370	5364058	26	4.9810	ng/mL	5.0000
FOSA	Auto	5.222	485093	1859370	18	0.9742	ng/mL	1.0000
N-MeFOSAA	M	4.996	116707	981341	19	0.9447	ng/mL	1.0000
N-MeFOSAA-d3	Auto	4.994	981341	5364058	26	4.9343	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.994	981341	981341	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.613	639109	639109	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.613	639109	5364058	26	4.8501	ng/mL	5.0000
N-MeFOSA	Auto	5.617	160317	639109	1	0.9812	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.585	773594	5364058	26	4.8523	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.585	773594	773594	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.593	211105	773594	20	0.9916	ng/mL	1.0000

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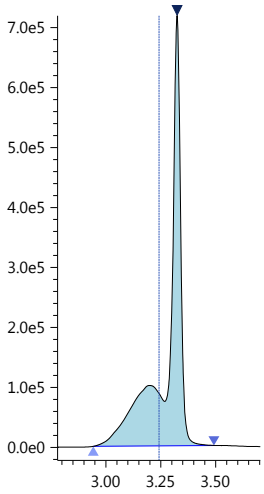
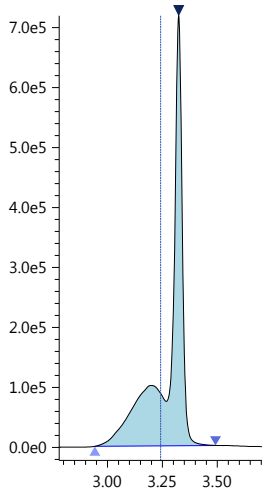
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.092	84244	946125	21	0.8755	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.090	946125	946125	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.090	946125	5364058	26	4.9560	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.753	1000464	1000464	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.753	1000464	5364058	26	4.8624	ng/mL	5.0000
N-EtFOSA	Auto	5.758	30958	1000464	23	0.9681	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.718	871672	871672	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.718	871672	5364058	26	4.9598	ng/mL	5.0000
N-EtFOSE	Auto	5.729	174522	871672	24	0.9742	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.072	5364058	5364058	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.198	87960	1033801	16	0.9107	ng/mL	0.9409
PFNS	Auto	4.870	73184	670476	13	0.9157	ng/mL	0.9616

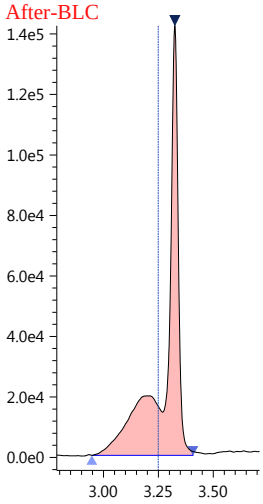
PFBA-13C_IS
Conc 5.0000
RT 3.324 Area 2802895
ISTD 216.90>172.15 (-) 7.20e5



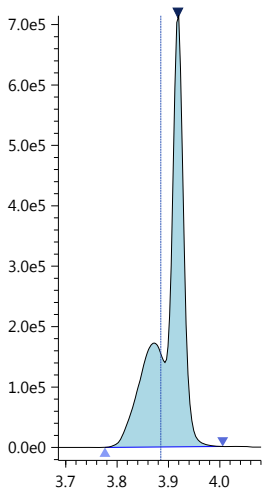
PFBA-13C
Conc 4.8409
RT 3.324 Area 2802895
Q 216.90>172.15 (-) 7.20e5



PFBA
Conc 0.9715
RT 3.325 Area 541569
Q 213.00>169.10 (-) 1.43e5
After-BLC



PFPeA-13C_IS
Conc 5.0000
RT 3.918 Area 1718269
ISTD 267.90>223.00 (-) 7.15e5



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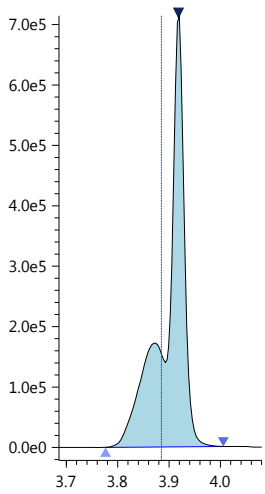
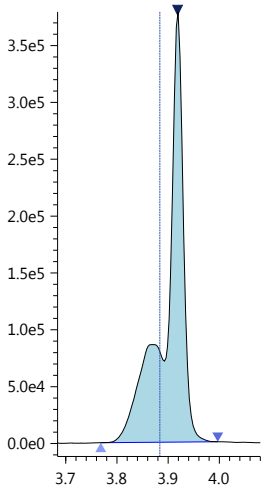
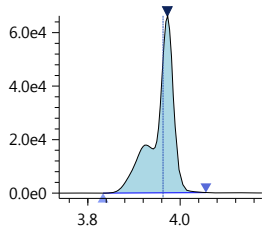
Conc 4.8740
RT 3.918 Area 1718269
Q 267.90>223.00 (-) 7.15e5



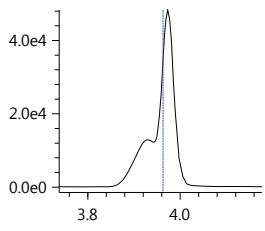
PFPeA
Conc 0.9509
RT 3.919 Area 893874
Q 263.05>219.10 (-) 3.80e5



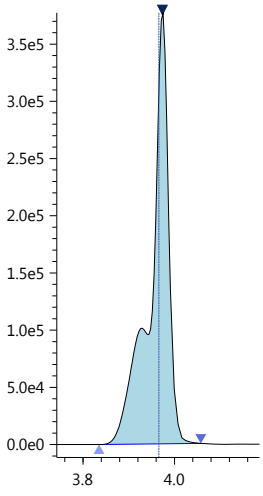
PFBS_1
Conc 0.8664
RT 3.972 Area 180198
R#1 69.81 (0.00)
Q 299.00>80.00 (-) 6.63e4



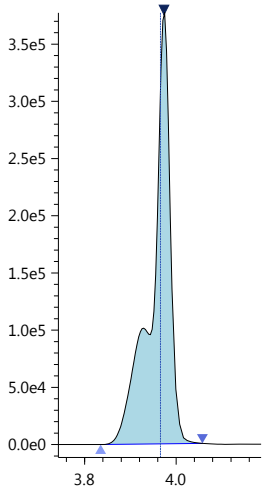
R1 298.80>99.00 (-) 4.83e4



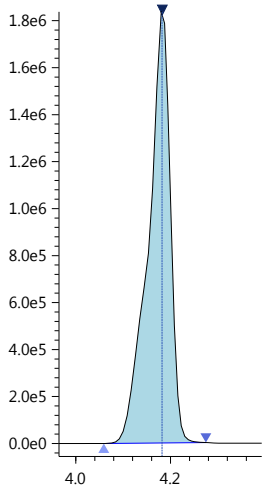
PFBS-13C
Conc 4.9030
RT 3.974 Area 1033801
Q 301.80>80.00 (-) 3.77e5



PFBS-13C_IS
Conc 5.0000
RT 3.974 Area 1033801
ISTD 301.80>80.00 (-) 3.77e5



PFHxA-13C_IS
Conc 5.0000
RT 4.183 Area 5894002
ISTD 314.90>270.10 (-) 1.84e6



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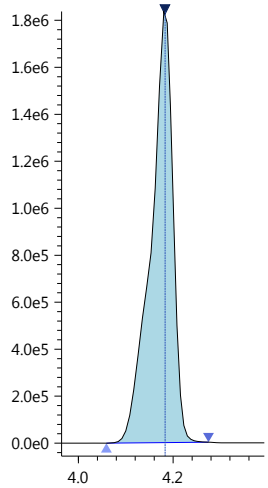
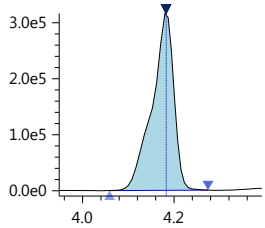
PFHxA-13C
Conc 4.9138
RT 4.183 Area 5894002

Q 314.90>270.10 (-) 1.84e6

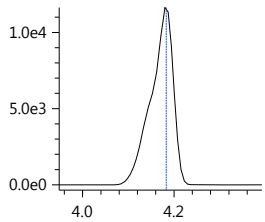


PFHxA
Conc 0.9569
RT 4.182 Area 1043126
R#1 3.68 (0.00)

Q 313.00>269.00 (-) 3.16e5

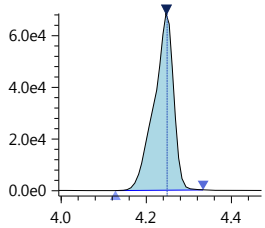


R1 313.00>119.10 (-) 1.16e4

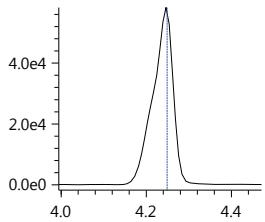


HPFO_DA
Conc 0.9754
RT 4.248 Area 217713
R#1 85.06 (0.00)

Q 329.00>169.00 (-) 6.86e4

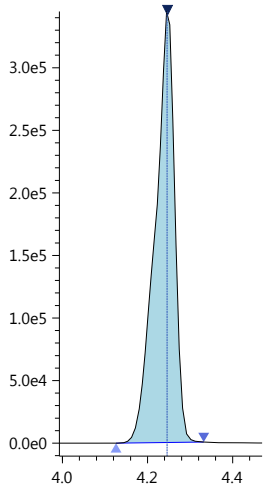


R1 329.00>285.10 (-) 5.83e4



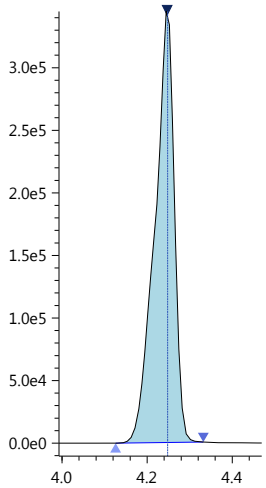
HFPO_DA-13C_IS
Conc 5.0000
RT 4.247 Area 1100105

ISTD 332.00>286.80 (-) 3.45e5



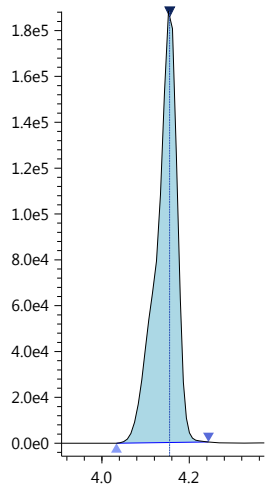
HFPO_DA-13C
Conc 4.8876
RT 4.247 Area 1100105

Q 332.00>286.80 (-) 3.45e5



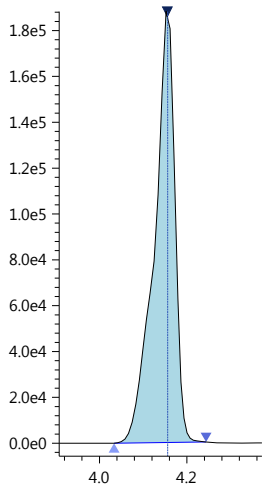
4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 613852

ISTD 328.80>309.05 (-) 1.88e5



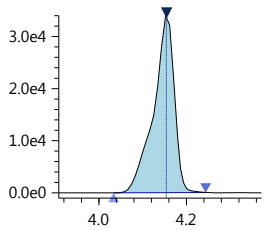
4_2-FTS-13C
Conc 5.1074
RT 4.155 Area 613852

Q 328.80>309.05 (-) 1.88e5

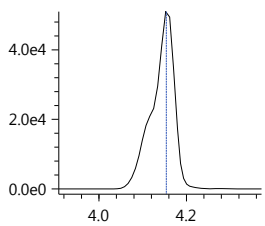


4_2-FTS_1
Conc 0.9456
RT 4.155 Area 111965
R#1 149.76 (0.00)

Q 327.00>307.05 (-) 3.40e4

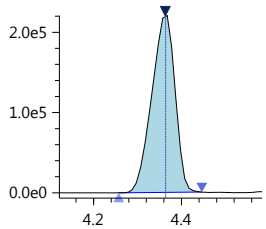


R1 327.00>81.10 (-) 5.10e4

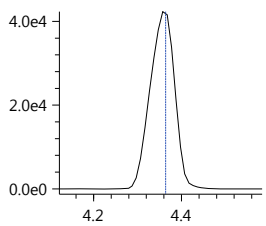


PFHpA
Conc 0.9661
RT 4.363 Area 814722
R#1 18.84 (0.00)

Q 362.90>319.00 (-) 2.21e5

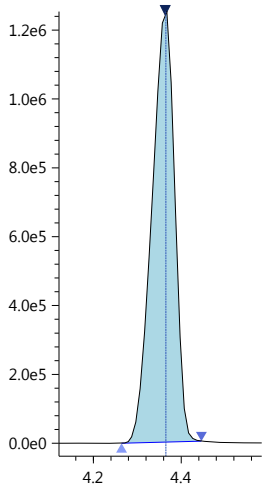


R1 362.90>169.00 (-) 4.23e4



PFHpA-13C_IS
Conc 5.0000
RT 4.364 Area 4531038

ISTD 366.90>322.10 (-) 1.25e6



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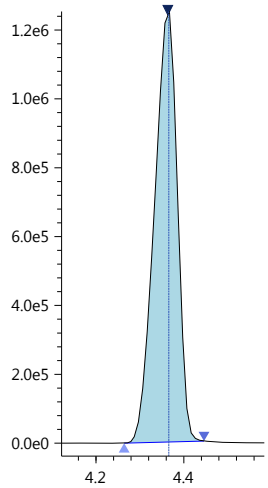
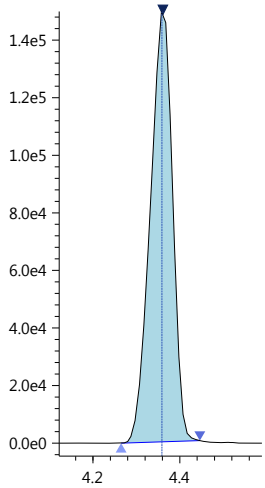
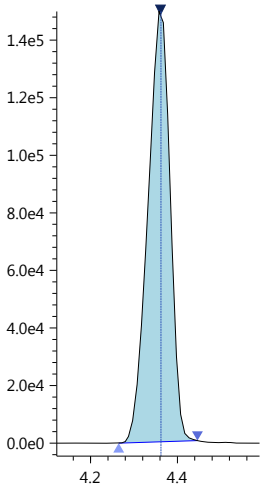
PFHpA-13C
Conc 4.5984
RT 4.364 Area 4531038
Q 366.90>322.10 (-) 1.25e6



PFHxS-18O_IS
Conc 5.0000
RT 4.361 Area 533442
ISTD 402.70>84.05 (-) 1.50e5



PFHxS-18O
Conc 4.4693
RT 4.361 Area 533442
Q 402.70>84.05 (-) 1.50e5



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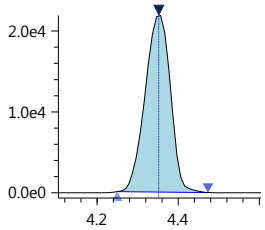
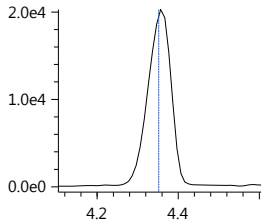
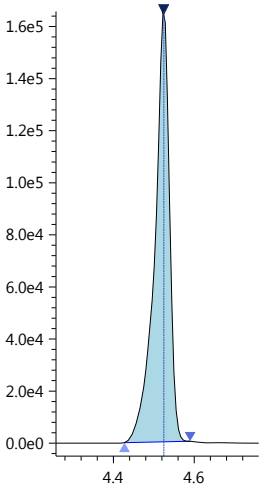
Conc 0.8989
RT 4.352 Area 95283
R#1 91.63 (0.00)
Q 399.00>80.00 (-) 2.19e4



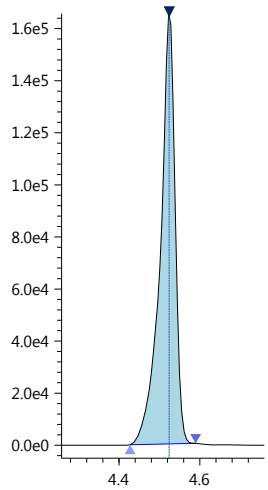
R1 399.00>99.00 (-) 2.03e4



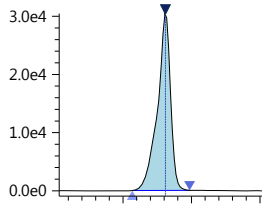
6_2-FTS-13C
Conc 4.9646
RT 4.525 Area 419765
Q 428.90>409.00 (-) 1.66e5



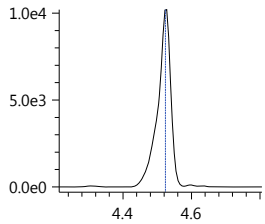
6_2-FTS-13C_IS
Conc 5.0000
RT 4.525 Area 419765
ISTD 428.90>409.00 (-) 1.66e5



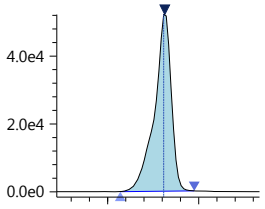
6_2-FTS_1
Conc 0.9721
RT 4.524 Area 80734
R#1 33.03 (0.00)
Q 427.00>407.00 (-) 3.05e4



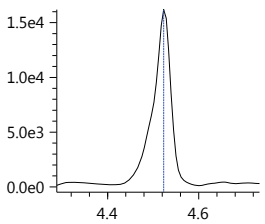
R1 427.00>80.90 (-) 1.02e4



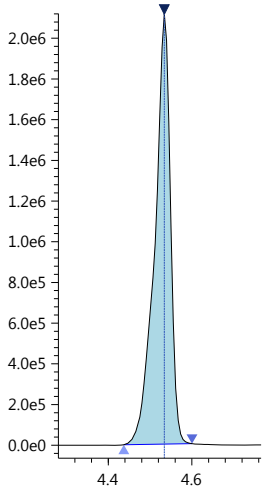
PFHpS_1
Conc 1.0460
RT 4.526 Area 133519
R#1 30.84 (0.00)
Q 449.00>80.15 (-) 5.22e4



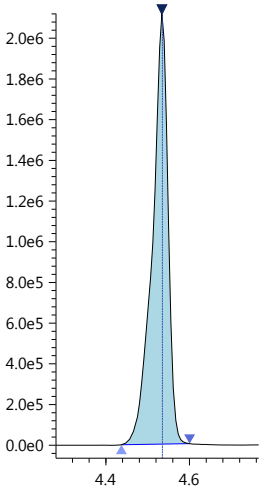
R1 449.00>99.20 (-) 1.62e4



PFOA-13C_IS
Conc 5.0000
RT 4.534 Area 5490594
ISTD 416.80>372.05 (-) 2.12e6



PFOA-13C
Conc 4.8908
RT 4.534 Area 5490594
Q 416.80>372.05 (-) 2.12e6



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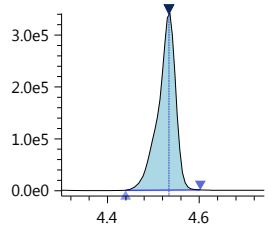
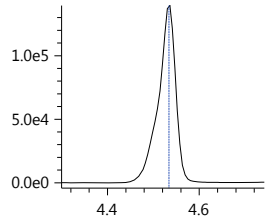
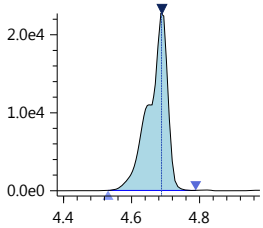
PFOA
Conc 0.9570
RT 4.534 Area 893586
R#1 40.89 (0.00)
Q 413.00>369.00 (-) 3.42e5



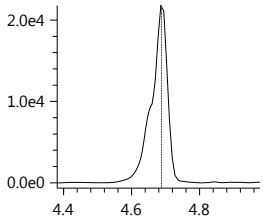
R1 413.00>169.10 (-) 1.39e5



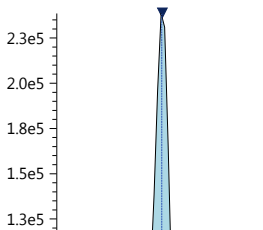
PFOS_1
Conc 0.9106
RT 4.690 Area 87413
R#1 95.74 (0.00)
Q 499.00>80.00 (-) 2.27e4



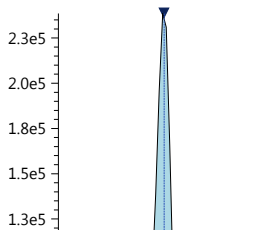
R1 499.00>99.00 (-) 2.18e4



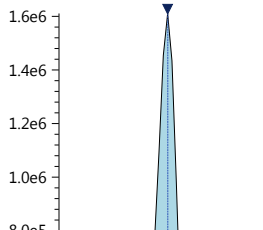
PFOS-13C_IS
Conc 5.0000
RT 4.690 Area 670476
ISTD 502.80>80.05 (-) 2.39e5



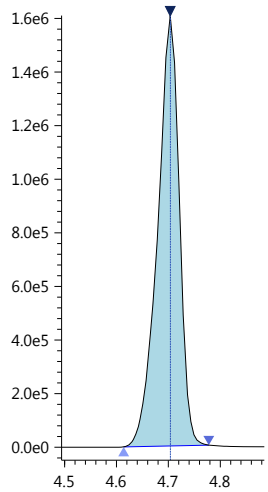
PFOS-13C
Conc 4.9823
RT 4.690 Area 670476
Q 502.80>80.05 (-) 2.39e5



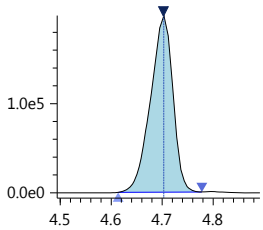
PFNA-13C_IS
Conc 5.0000
RT 4.703 Area 4657436
ISTD 467.80>423.00 (-) 1.61e6



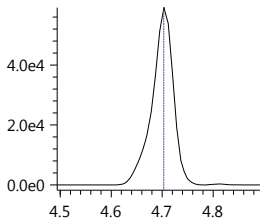
PFNA-13C
Conc 4.8101
RT 4.703 Area 4657436
Q 467.80>423.00 (-) 1.61e6



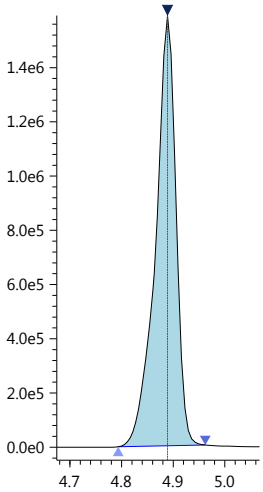
PFNA
Conc 0.9206
RT 4.703 Area 603449
R#1 29.72 (0.00)
Q 463.00>418.90 (-) 1.99e5



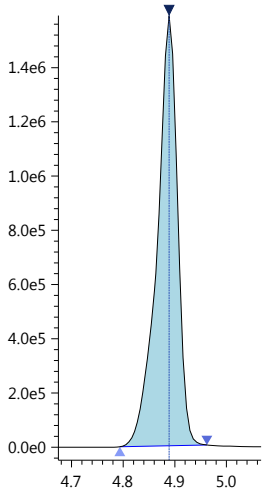
R1 463.00>219.00 (-) 5.92e4



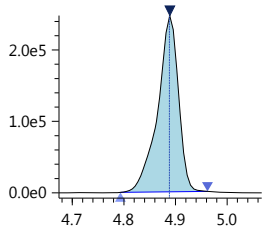
PFDA-13C_IS
Conc 5.0000
RT 4.889 Area 4357211
ISTD 514.80>469.95 (-) 1.59e6



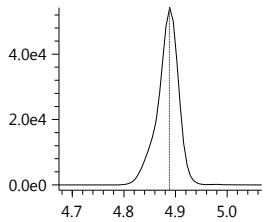
PFDA-13C
Conc 4.8570
RT 4.889 Area 4357211
Q 514.80>469.95 (-) 1.59e6



PFDA
Conc 0.9324
RT 4.889 Area 686497
R#1 21.93 (0.00)
Q 513.00>468.80 (-) 2.48e5



R1 513.00>219.10 (-) 5.42e4



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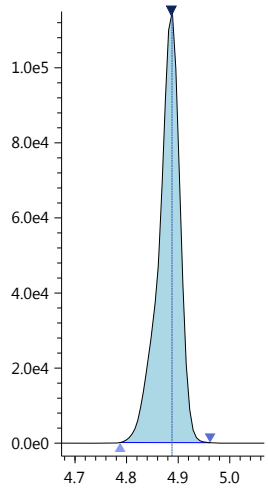
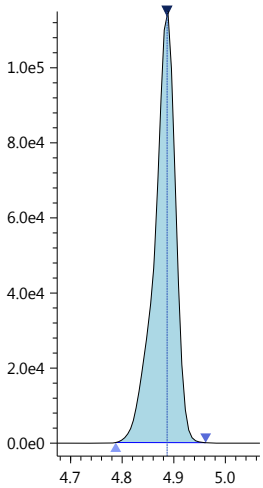
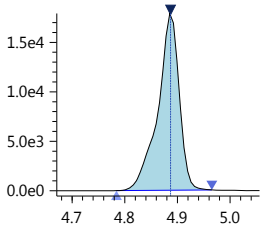
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 326012
ISTD 528.80>509.00 (-) 1.15e5



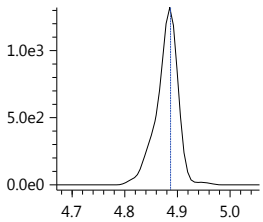
8_2-FTS-13C
Conc 4.8907
RT 4.887 Area 326012
Q 528.80>509.00 (-) 1.15e5



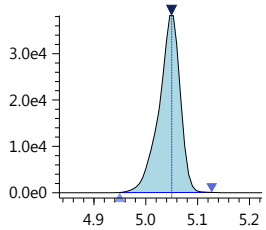
8_2-FTS_1
Conc 0.9705
RT 4.887 Area 50239
R#1 7.39 (0.00)
Q 527.10>506.90 (-) 1.79e4



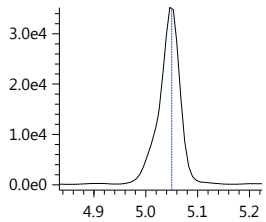
R1 527.20>487.00 (-) 1.32e3



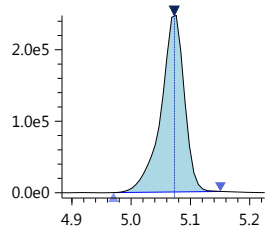
PFDS_1
Conc 0.9437
RT 5.050 Area 109177
R#1 89.86 (0.00)
Q 599.00>79.90 (-) 3.82e4



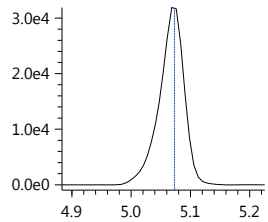
R1 599.00>99.10 (-) 3.52e4



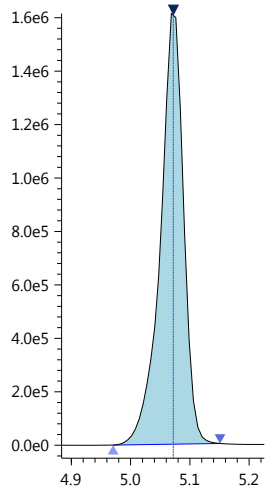
PFUnA
Conc 0.9490
RT 5.073 Area 677997
R#1 13.10 (0.00)
Q 563.00>518.90 (-) 2.48e5



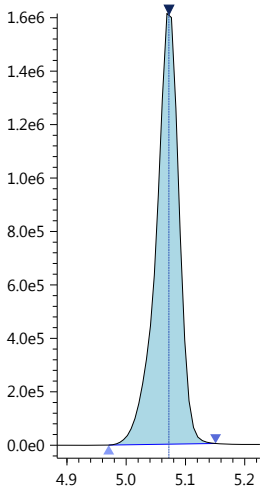
R1 563.00>219.00 (-) 3.19e4



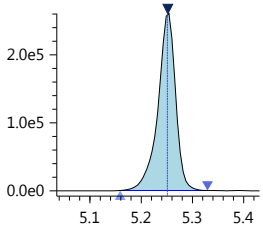
PFUnA-13C_IS
Conc 5.0000
RT 5.072 Area 4395741
ISTD 564.80>519.95 (-) 1.62e6



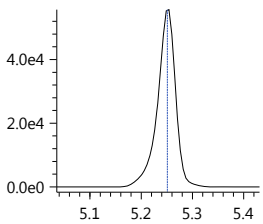
PFUnA-13C
Conc 5.0378
RT 5.072 Area 4395741
Q 564.80>519.95 (-) 1.62e6



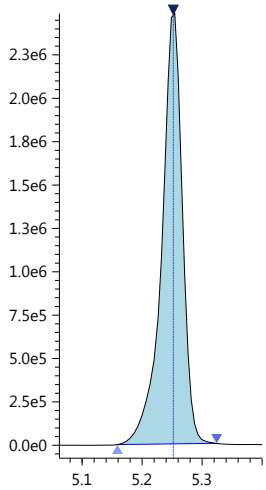
PFDoA
Conc 0.9754
RT 5.252 Area 625785
R#1 21.49 (0.00)
Q 613.05>569.00 (-) 2.61e5



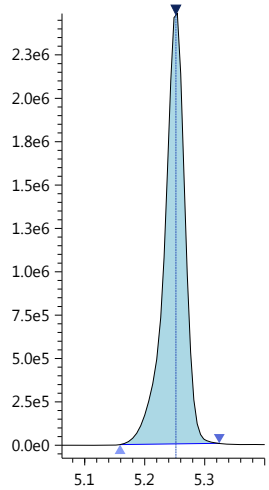
R1 613.05>169.00 (-) 5.57e4



PFDoA-13C
Conc 4.9835
RT 5.252 Area 5943662
Q 614.80>569.95 (-) 2.49e6



PFDoA-13C_IS
Conc 5.0000
RT 5.252 Area 5943662
ISTD 614.80>569.95 (-) 2.49e6



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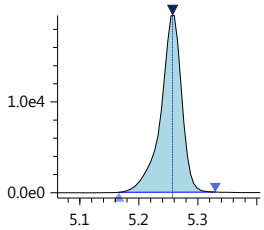
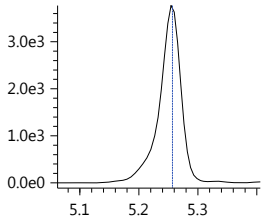
10_2-FtS_1

Conc 1.0068
RT 5.257 Area 47981
R#1 19.26 (0.00)

Q 627.00>606.95 (-) 1.95e4



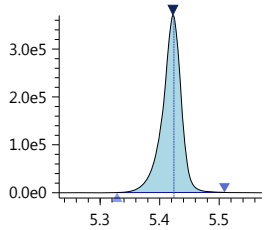
R1 627.00>81.25 (-) 3.77e3



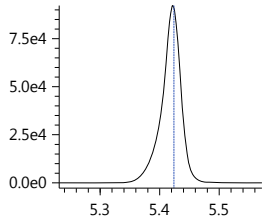
PFTrDA

Conc 1.0114
RT 5.422 Area 800860
R#1 24.87 (0.00)

Q 663.00>618.90 (-) 3.70e5



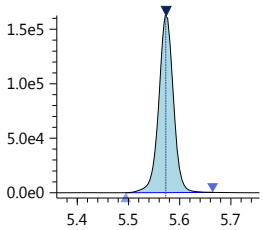
R1 662.90>169.00 (-) 9.22e4



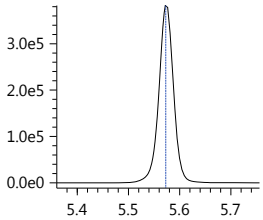
PFTeDA

Conc 0.9435
RT 5.574 Area 322651
R#1 238.16 (0.00)

Q 713.40>669.00 (-) 1.63e5



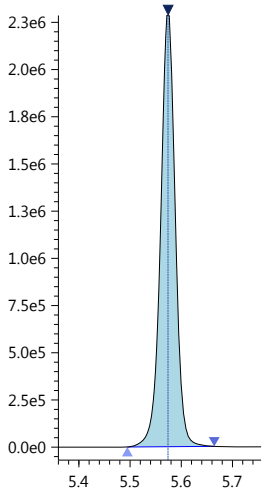
R1 713.40>169.10 (-) 3.82e5



PFTeDA-13C

Conc 4.8674
RT 5.574 Area 4572817

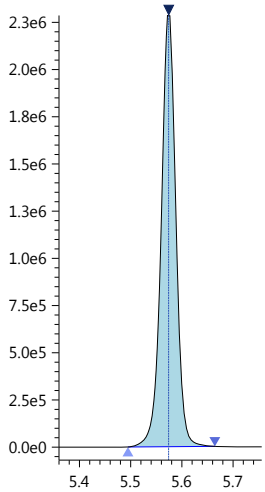
Q 714.70>669.90 (-) 2.29e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.574 Area 4572817

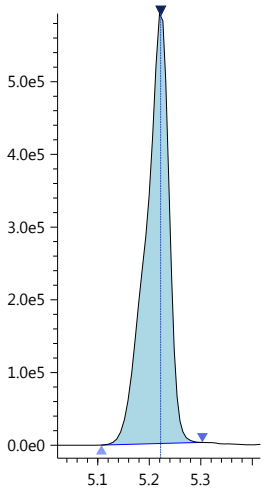
ISTD 714.70>669.90 (-) 2.29e6



FOSA-13C_IS

Conc 5.0000
RT 5.222 Area 1859370

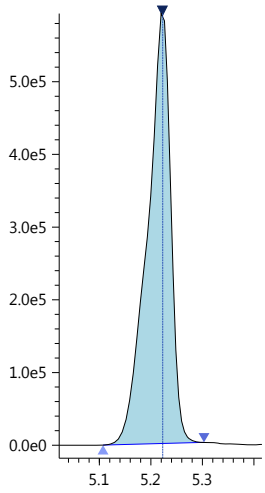
ISTD 506.00>78.05 (-) 5.94e5



FOSA-13C

Conc 4.9810
RT 5.222 Area 1859370

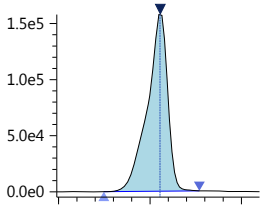
Q 506.00>78.05 (-) 5.94e5



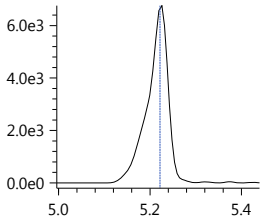
FOSA

Conc 0.9742
RT 5.222 Area 485093
R#1 4.16 (0.00)

Q 498.20>78.00 (-) 1.58e5



R1 498.20>64.10 (-) 6.76e3

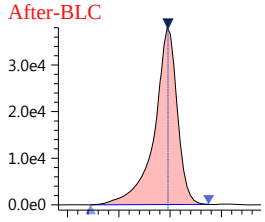


N-MeFOSAA

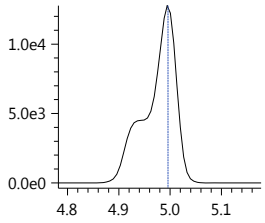
Conc 0.9447
RT 4.996 Area 116707
R#1 33.34 (0.00)

Q 570.20>419.00 (-) 3.80e4

After-BLC



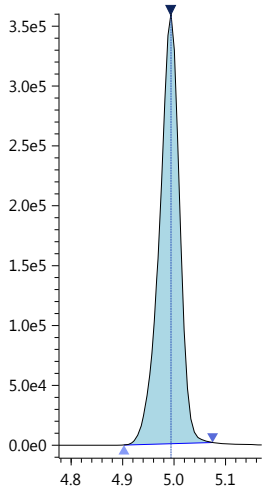
R1 570.20>512.00 (-) 1.28e4



N-MeFOSAA-d3

Conc 4.9343
RT 4.994 Area 981341

Q 572.80>419.05 (-) 3.61e5



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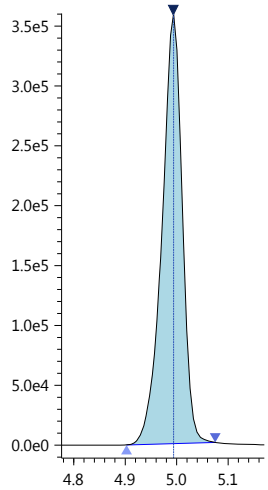
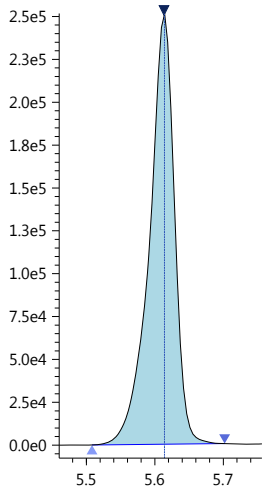
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 981341

ISTD 572.80>419.05 (-) 3.61e5



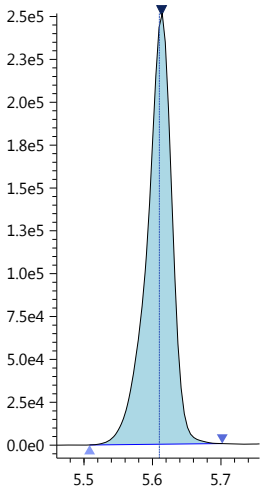
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.613 Area 639109

ISTD 514.90>168.90 (-) 2.52e5



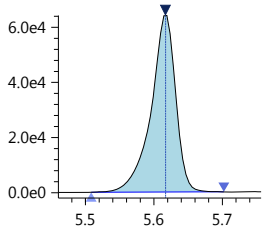
N-MeFOSA-d3
Conc 4.8501
RT 5.613 Area 639109

Q 514.90>168.90 (-) 2.52e5

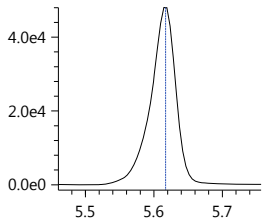


N-MeFOSA
Conc 0.9812
RT 5.617 Area 160317
R#1 74.53 (0.00)

Q 512.00>169.10 (-) 6.43e4

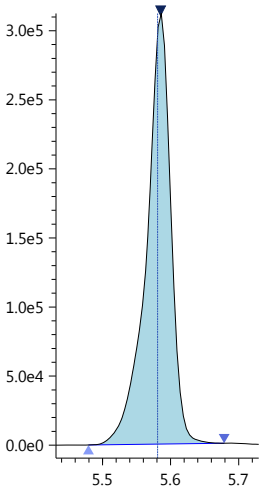


R1 512.00>219.00 (-) 4.80e4



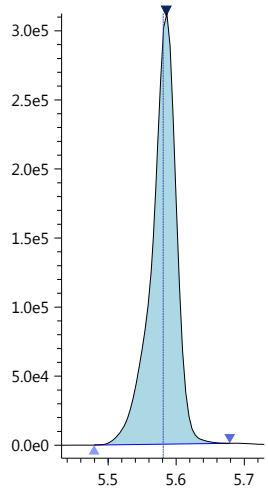
N-MeFOSE-d7
Conc 4.8523
RT 5.585 Area 773594

Q 622.70>59.10 (-) 3.13e5



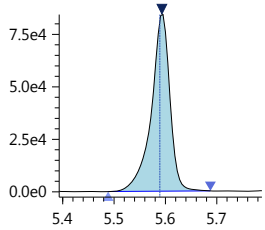
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.585 Area 773594

ISTD 622.70>59.10 (-) 3.13e5

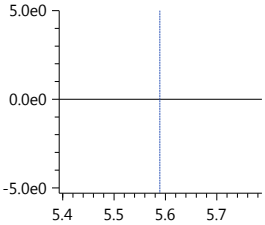


N-MeFOSE
Conc 0.9916
RT 5.593 Area 211105
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 8.44e4



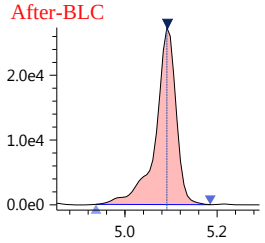
R1 556.00>121.20 (-) 0.00e0



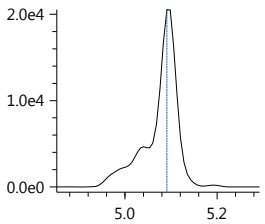
N-EtFOSAA
Conc 0.8755
RT 5.092 Area 84244
R#1 74.53 (0.00)

Q 584.20>418.95 (-) 2.74e4

After-BLC

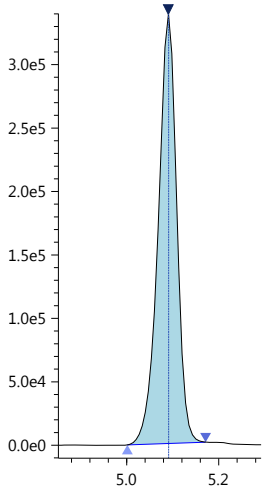


R1 584.20>526.10 (-) 2.05e4



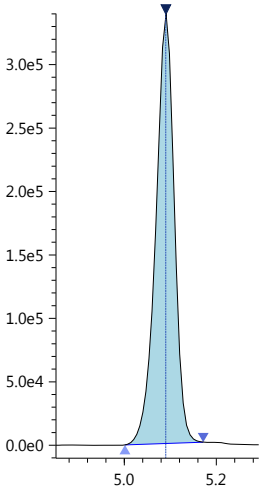
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.090 Area 946125

ISTD 588.80>419.00 (-) 3.40e5



N-EtFOSAA-d5
Conc 4.9560
RT 5.090 Area 946125

Q 588.80>419.00 (-) 3.40e5



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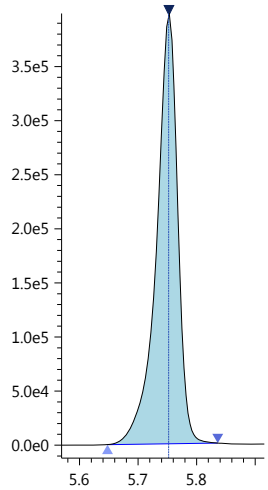
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.753 Area 1000464

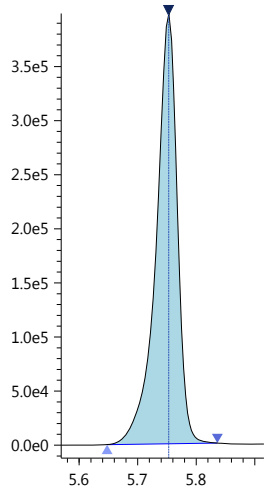
ISTD 530.90>169.15 (-) 3.99e5



N-EtFOSA-d9

Conc 4.8624
RT 5.753 Area 1000464

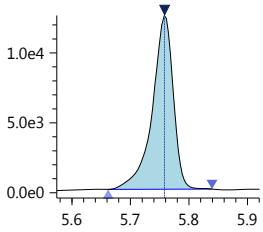
Q 530.90>169.15 (-) 3.99e5



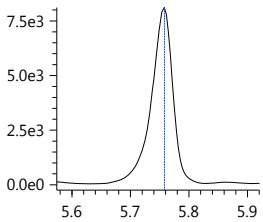
N-EtFOSA

Conc 0.9681
RT 5.758 Area 30958
R#1 65.41 (0.00)

Q 526.90>169.10 (-) 1.27e4



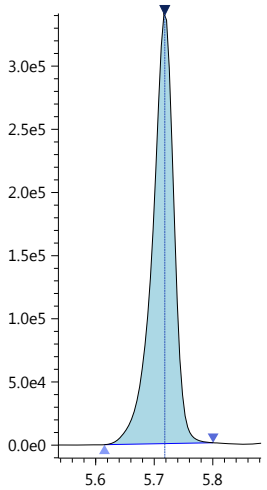
R1 526.90>219.00 (-) 8.11e3



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.718 Area 871672

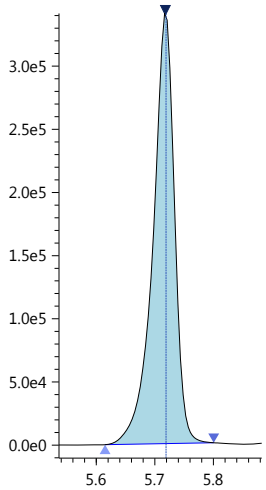
ISTD 638.70>59.10 (-) 3.42e5



N-EtFOSE-d9

Conc 4.9598
RT 5.718 Area 871672

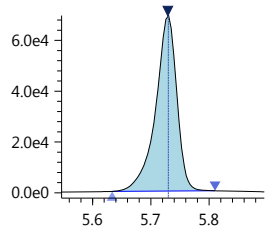
Q 638.70>59.10 (-) 3.42e5



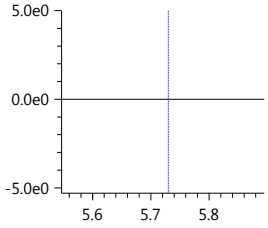
N-EtFOSE

Conc 0.9742
RT 5.729 Area 174522
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 6.98e4



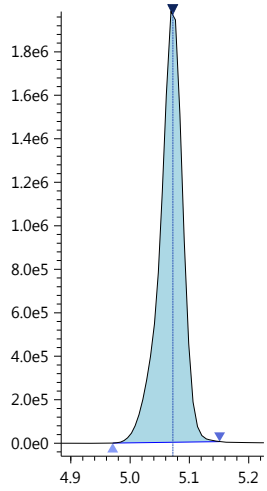
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.072 Area 5364058

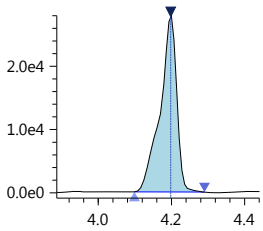
ISTD 570.00>525.00 (-) 1.99e6



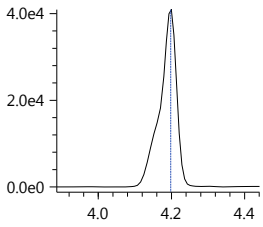
PFPeS

Conc 0.9107
RT 4.198 Area 87960
R#1 148.20 (0.00)

Q 349.00>99.00 (-) 2.80e4



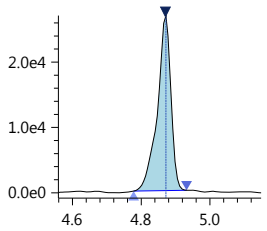
R1 349.00>79.95 (-) 4.09e4



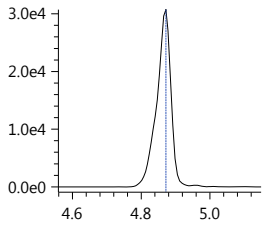
PFNS

Conc 0.9157
RT 4.870 Area 73184
R#1 114.69 (0.00)

Q 549.00>99.00 (-) 2.71e4



R1 549.00>79.95 (-) 3.07e4



Insight Report

Printed at 1/21/2019 9:31:25 AM

190118_026

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Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_026.lcd
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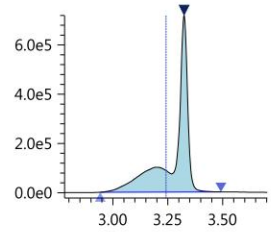
PFBA-13C_IS
Conc 5.0000
RT 3.324 Area 2802895
ISTD 216.90>172.15 (-) 7.20e5



PFBA-13C
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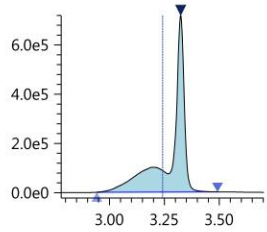
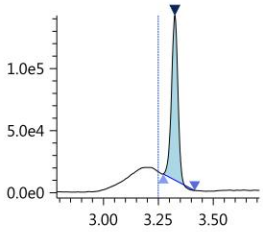
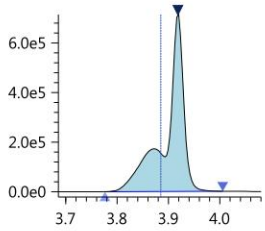
Q 216.90>172.15 (-) 7.20e5



PFBA
Conc 0.0995
RT 3.325 Area 267390
Q 213.00>169.10 (-) 1.43e5



PFPeA-13C_IS
Conc 5.0000
RT 3.918 Area 1718269
ISTD 267.90>223.00 (-) 7.15e5



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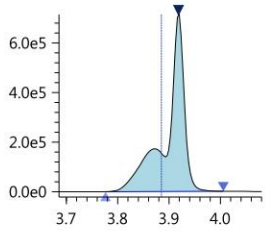
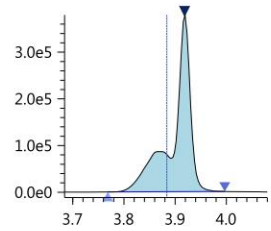
Conc 4.8740
RT 3.918 Area 1718269
Q 267.90>223.00 (-) 7.15e5



PFPeA
Conc 0.2259
RT 3.919 Area 893874
Q 263.05>219.10 (-) 3.80e5



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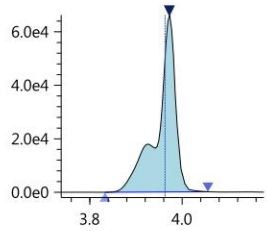
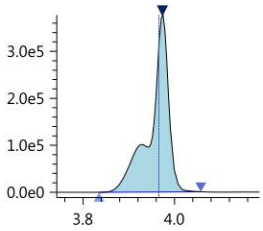
Conc 0.1895
RT 3.972 Area 180198
Q 299.00>80.00 (-) 6.63e4



PFBS-13C
Conc 4.9030
RT 3.974 Area 1033801
Q 301.80>80.00 (-) 3.77e5



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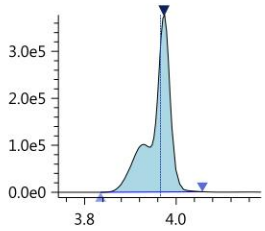
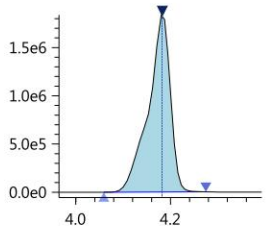


PFHxA-13C_IS
Conc 5.0000
RT 4.183 Area 5894002
ISTD 314.90>270.10 (-) 1.84e6



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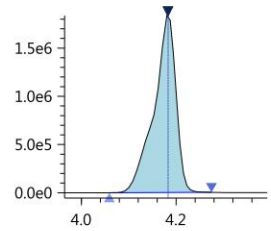
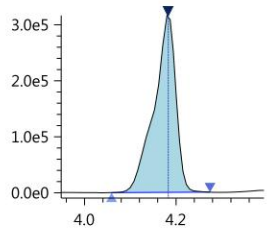
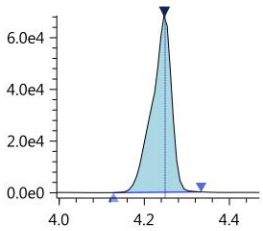
Conc 4.9138
RT 4.183 Area 5894002
Q 314.90>270.10 (-) 1.84e6



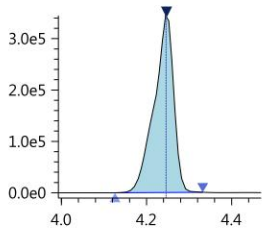
PFHxA
Conc 0.2113
RT 4.182 Area 1043126
Q 313.00>269.00 (-) 3.16e5



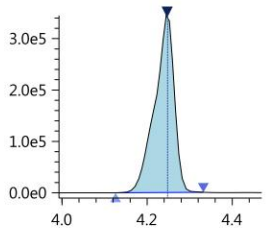
HPFO_DA
Conc 0.2066
RT 4.248 Area 217713
Q 329.00>169.00 (-) 6.86e4



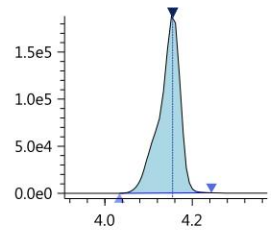
HFPO_DA-13C_IS
Conc 5.0000
RT 4.247 Area 1100105
ISTD 332.00>286.80 (-) 3.45e5



HFPO_DA-13C
Conc 4.8876
RT 4.247 Area 1100105
Q 332.00>286.80 (-) 3.45e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 613852
ISTD 328.80>309.05 (-) 1.88e5



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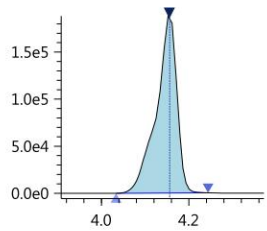
Conc 5.1074
RT 4.155 Area 613852
Q 328.80>309.05 (-) 1.88e5



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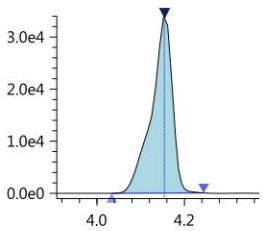
RT 4.155 Area 111965
Q 327.00>307.05 (-) 3.40e4



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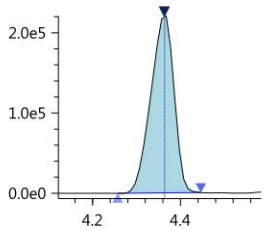
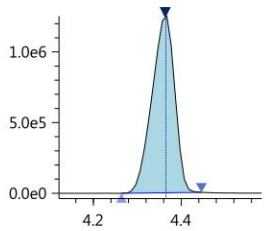
Conc 0.2089
RT 4.363 Area 814722
Q 362.90>319.00 (-) 2.21e5



PFHpA-13C_IS
Conc 5.0000
RT 4.364 Area 4531038
ISTD 366.90>322.10 (-) 1.25e6



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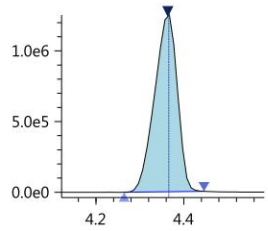
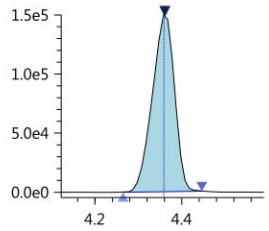
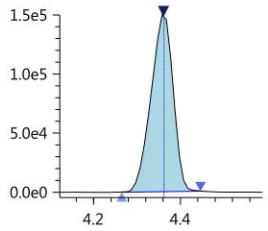
PFHpA-13C
Conc 4.5984
RT 4.364 Area 4531038
Q 366.90>322.10 (-) 1.25e6



PFHxS-18O_IS
Conc 5.0000
RT 4.361 Area 533442
ISTD 402.70>84.05 (-) 1.50e5



PFHxS-18O
Conc 4.4693
RT 4.361 Area 533442
Q 402.70>84.05 (-) 1.50e5



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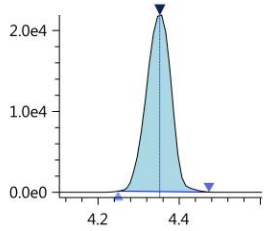
Conc 0.1985
RT 4.352 Area 95283
Q 399.00>80.00 (-) 2.19e4



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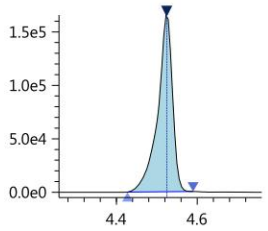
Conc 4.9646
RT 4.525 Area 419765
Q 428.90>409.00 (-) 1.66e5



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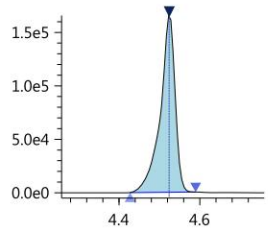
Conc 5.0000
RT 4.525 Area 419765
ISTD 428.90>409.00 (-) 1.66e5



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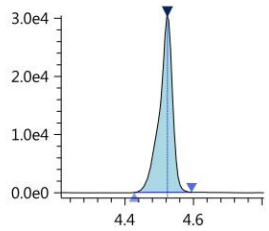
Conc 0.2316
RT 4.524 Area 80734
Q 427.00>407.00 (-) 3.05e4



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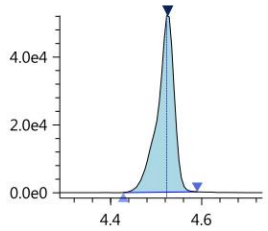
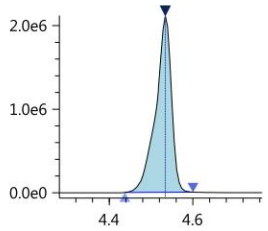
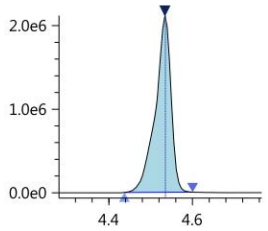
Conc 0.2228
RT 4.526 Area 133519
Q 449.00>80.15 (-) 5.22e4



PFOA-13C_IS
Conc 5.0000
RT 4.534 Area 5490594
ISTD 416.80>372.05 (-) 2.12e6



PFOA-13C
Conc 4.8908
RT 4.534 Area 5490594
Q 416.80>372.05 (-) 2.12e6



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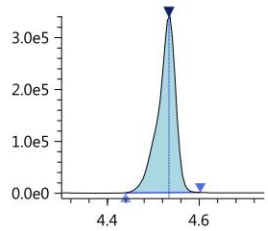
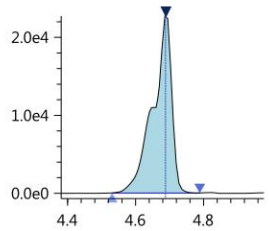
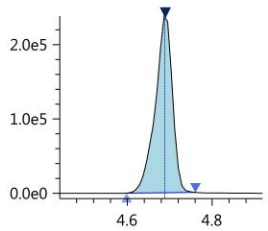
RT 4.534 Area 893586
Q 413.00>369.00 (-) 3.42e5



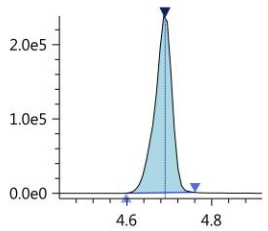
PFOS_1
Conc 0.1981
RT 4.690 Area 87413
Q 499.00>80.00 (-) 2.27e4



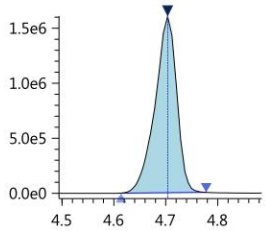
PFOS-13C_IS
Conc 5.0000
RT 4.690 Area 670476
ISTD 502.80>80.05 (-) 2.39e5



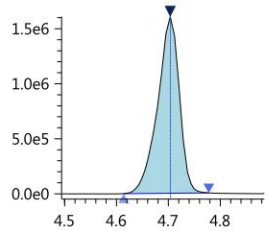
PFOS-13C
Conc 4.9823
RT 4.690 Area 670476
Q 502.80>80.05 (-) 2.39e5



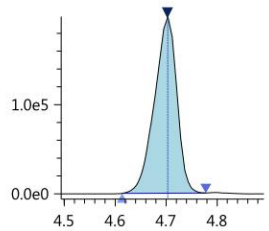
PFNA-13C_IS
Conc 5.0000
RT 4.703 Area 4657436
ISTD 467.80>423.00 (-) 1.61e6



PFNA-13C
Conc 4.8101
RT 4.703 Area 4657436
Q 467.80>423.00 (-) 1.61e6



PFNA
Conc 0.1981
RT 4.703 Area 603449
Q 463.00>418.90 (-) 1.99e5



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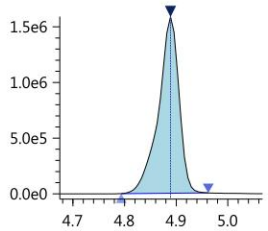
Conc 5.0000
RT 4.889 Area 4357211
ISTD 514.80>469.95 (-) 1.59e6



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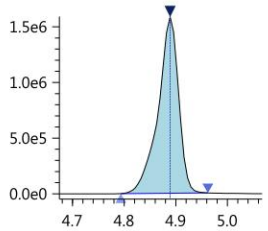
Conc 4.8570
RT 4.889 Area 4357211
Q 514.80>469.95 (-) 1.59e6



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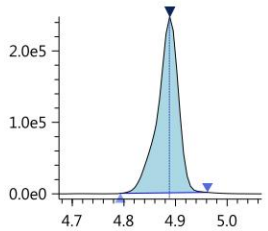
RT 4.889 Area 686497
Q 513.00>468.80 (-) 2.48e5



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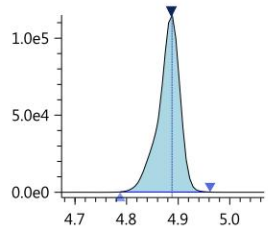
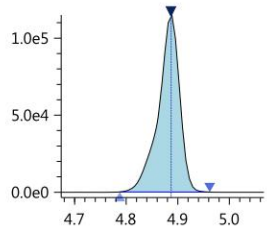
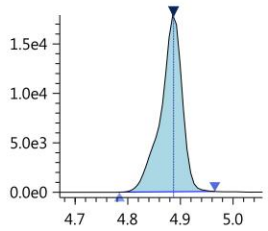
8_2-FTS-13C_IS
Conc 5.0000
RT 4.887 Area 326012
ISTD 528.80>509.00 (-) 1.15e5



8_2-FTS-13C
Conc 4.8907
RT 4.887 Area 326012
Q 528.80>509.00 (-) 1.15e5



8_2-FTS_1
Conc 0.2200
RT 4.887 Area 50239
Q 527.10>506.90 (-) 1.79e4



PFDS_1
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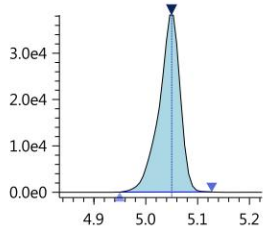
Q 599.00>79.90 (-) 3.82e4



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Conc 0.2108
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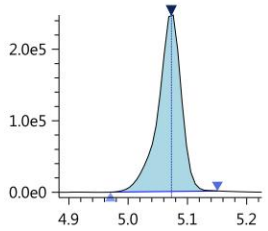
Q 563.00>518.90 (-) 2.48e5



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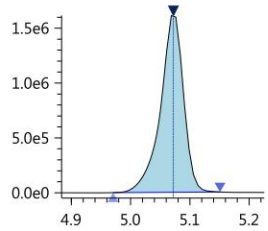
Conc 5.0000
RT 5.072 Area 4395741
ISTD 564.80>519.95 (-) 1.62e6



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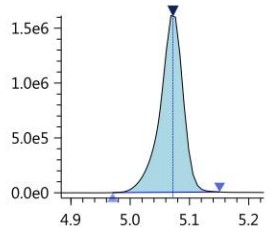
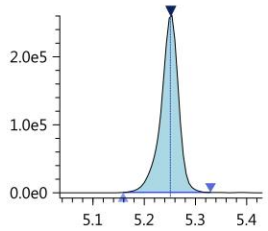
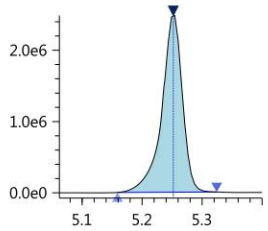
Conc 5.0378
RT 5.072 Area 4395741
Q 564.80>519.95 (-) 1.62e6



PFDoA
Conc 0.2140
RT 5.252 Area 625785
Q 613.05>569.00 (-) 2.61e5



PFDoA-13C
Conc 4.9835
RT 5.252 Area 5943662
Q 614.80>569.95 (-) 2.49e6



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Conc 5.0000
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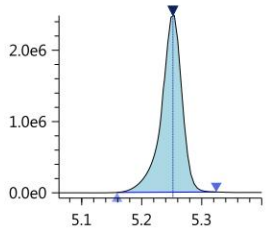
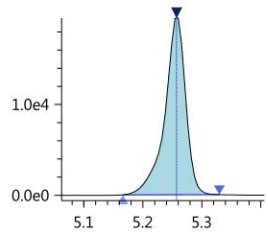
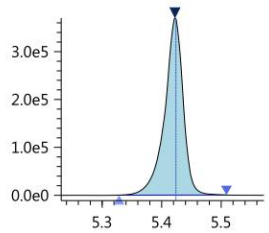
ISTD 614.80>569.95 (-) 2.49e6



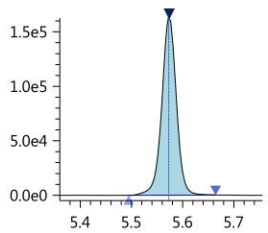
10_2-FtS_1
Conc 0.2307
RT 5.257 Area 47981
Q 627.00>606.95 (-) 1.95e4



PFTrDA
Conc 0.2220
RT 5.422 Area 800860
Q 663.00>618.90 (-) 3.70e5



PFTeDA
Conc 0.2249
RT 5.574 Area 322651
Q 713.40>669.00 (-) 1.63e5



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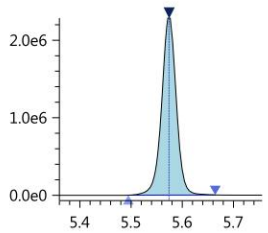
Conc 4.8674
RT 5.574 Area 4572817
Q 714.70>669.90 (-) 2.29e6



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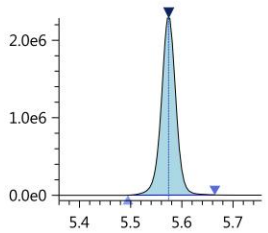
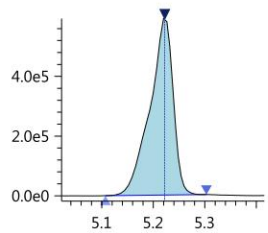
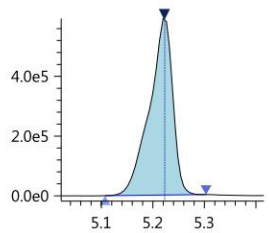
RT 5.574 Area 4572817
ISTD 714.70>669.90 (-) 2.29e6



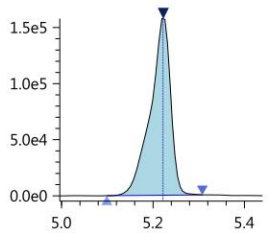
FOSA-13C_IS
Conc 5.0000
RT 5.222 Area 1859370
ISTD 506.00>78.05 (-) 5.94e5



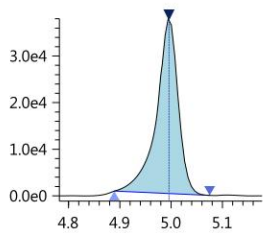
FOSA-13C
Conc 4.9810
RT 5.222 Area 1859370
Q 506.00>78.05 (-) 5.94e5



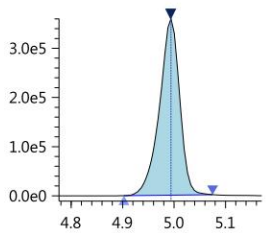
FOSA
Conc 0.2140
RT 5.222 Area 485093
Q 498.20>78.00 (-) 1.58e5



N-MeFOSAA
Conc 0.2045
RT 4.996 Area 110374
Q 570.20>419.00 (-) 3.80e4



N-MeFOSAA-d3
Conc 4.9343
RT 4.994 Area 981341
Q 572.80>419.05 (-) 3.61e5



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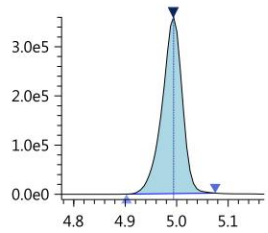
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.994 Area 981341
ISTD 572.80>419.05 (-) 3.61e5



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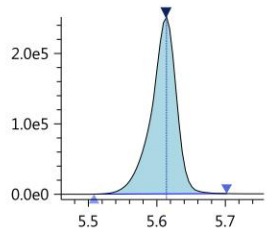
Conc 5.0000
RT 5.613 Area 639109
ISTD 514.90>168.90 (-) 2.52e5



N-MeFOSA-d3
Conc 4.8501
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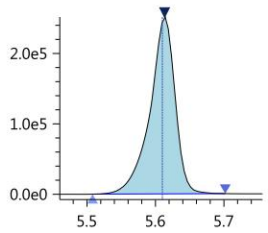
Q 514.90>168.90 (-) 2.52e5



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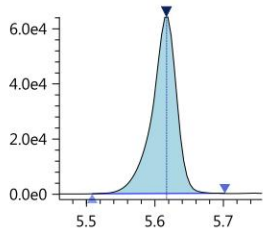
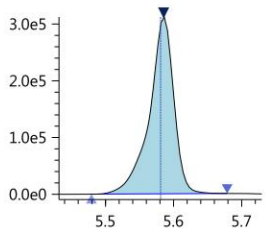
Q 512.00>169.10 (-) 6.43e4



N-MeFOSE-d7
Conc 4.8523
RT 5.585 Area 773594
Q 622.70>59.10 (-) 3.13e5



N-MeFOSE-d7_IS
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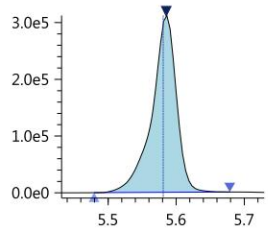
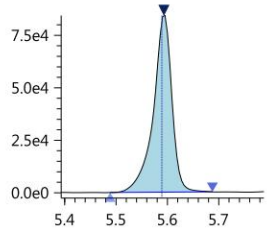
ISTD 622.70>59.10 (-) 3.13e5



N-MeFOSE
Conc 0.2146
RT 5.593 Area 211105
Q 616.00>59.00 (-) 8.44e4



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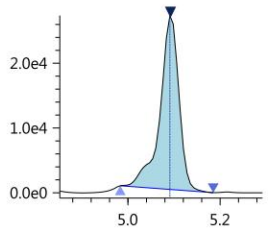
RT 5.092 Area 76984
Q 584.20>418.95 (-) 2.74e4



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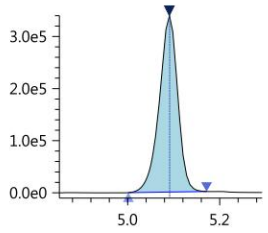
ISTD 588.80>419.00 (-) 3.40e5



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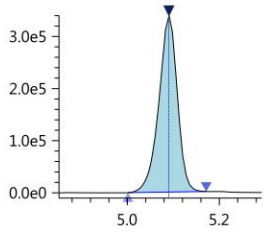

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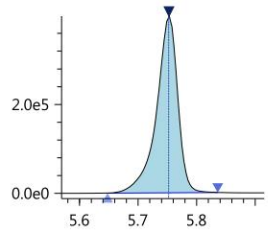
RT 5.753 Area 1000464
ISTD 530.90>169.15 (-) 3.99e5



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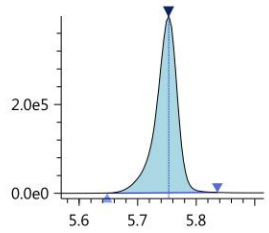

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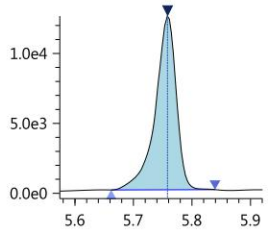
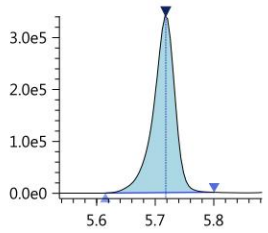
Conc 0.2071
RT 5.758 Area 30958
Q 526.90>169.10 (-) 1.27e4



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.718 Area 871672
ISTD 638.70>59.10 (-) 3.42e5



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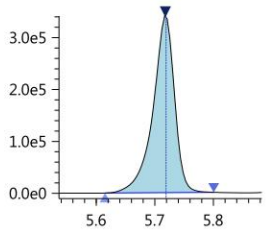
Q 638.70>59.10 (-) 3.42e5



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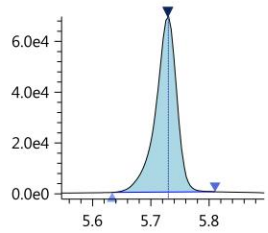
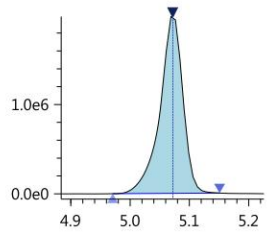
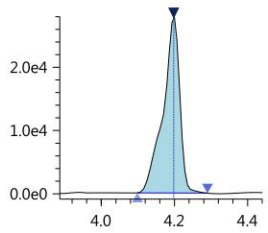
Q 630.00>58.90 (-) 6.98e4



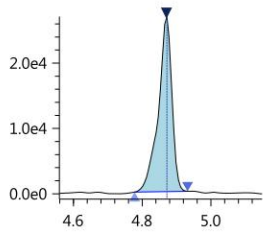
13C7-PFUnDA_IS
Conc 5.0000
RT 5.072 Area 5364058
ISTD 570.00>525.00 (-) 1.99e6



PFPeS
Conc 0.2081
RT 4.198 Area 87960
Q 349.00>99.00 (-) 2.80e4



PFNS
Conc 0.2038
RT 4.870 Area 73184
Q 549.00>99.00 (-) 2.71e4



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190118_027

Sample ID: 5.0 PPB ICAL
Date acquired: 1/18/2019 6:28:59 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_027.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.331	2773691	2773691	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.331	2773691	5239923	26	4.9040	ng/mL	5.0000
PFBA	M	3.332	2809106	2773691	2	5.0924	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.927	1692770	1692770	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.927	1692770	5239923	26	4.9154	ng/mL	5.0000
PFPeA	Auto	3.927	4284219	1692770	4	4.9773	ng/mL	5.0000
PFBS_1	Auto	3.980	918241	1013777	16	4.5020	ng/mL	4.4368
PFBS-13C	Auto	3.982	1013777	5239923	26	4.9219	ng/mL	5.0000
PFBS-13C_IS	Auto	3.982	1013777	1013777	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.191	5653829	5653829	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.191	5653829	5239923	26	4.8252	ng/mL	5.0000
PFHxA	Auto	4.191	5190986	5653829	6	4.9565	ng/mL	5.0000
HPFO_DA	Auto	4.256	1145033	1103708	3	5.1132	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.255	1103708	1103708	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.255	1103708	5239923	26	5.0198	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.164	590322	590322	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.164	590322	5239923	26	5.0280	ng/mL	5.0000
4_2-FTS_1	Auto	4.163	523108	590322	5	4.5941	ng/mL	4.6861
PFHpA	Auto	4.370	4344713	4518221	8	5.1278	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.370	4518221	4518221	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.370	4518221	5239923	26	4.6941	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.369	595395	595395	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.369	595395	5239923	26	5.1066	ng/mL	5.0000
PFHxS_1	Auto	4.365	562815	595395	7	4.7573	ng/mL	4.5654
6_2-FTS-13C	Auto	4.533	397289	5239923	26	4.8101	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.533	397289	397289	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.532	365789	397289	10	4.6538	ng/mL	4.7558
PFHpS_1	Auto	4.534	636782	595395	7	4.4695	ng/mL	4.7672
PFOA-13C_IS	Auto	4.543	5327831	5327831	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.543	5327831	5239923	26	4.8583	ng/mL	5.0000
PFOA	Auto	4.543	4623110	5327831	9	5.1206	ng/mL	5.0000
PFOS_1	Auto	4.697	444391	664607	13	4.6702	ng/mL	4.6461
PFOS-13C_IS	Auto	4.698	664607	664607	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.698	664607	5239923	26	5.0557	ng/mL	5.0000
PFNA-13C_IS	Auto	4.712	4544337	4544337	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.712	4544337	5239923	26	4.8045	ng/mL	5.0000
PFNA	Auto	4.713	3253156	4544337	11	5.0633	ng/mL	5.0000
PFDA-13C_IS	Auto	4.897	4312647	4312647	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.897	4312647	5239923	26	4.9212	ng/mL	5.0000
PFDA	Auto	4.897	3528254	4312647	12	4.8415	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.896	322886	322886	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.896	322886	5239923	26	4.9586	ng/mL	5.0000
8_2-FTS_1	Auto	4.895	255391	322886	15	4.9811	ng/mL	4.8002
PFDS_1	Auto	5.057	555740	664607	13	4.8460	ng/mL	4.8233
PFUnA	Auto	5.079	3400264	4214990	14	4.9859	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.080	4214990	4214990	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.080	4214990	5239923	26	4.9451	ng/mL	5.0000
PFDoA	Auto	5.260	3016339	5589275	17	4.9883	ng/mL	5.0000
PFDoA-13C	Auto	5.259	5589275	5239923	26	4.7974	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.259	5589275	5589275	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.265	227080	322886	15	4.8112	ng/mL	4.8310
PFTrDA	Auto	5.430	3747226	4399125	22	4.9060	ng/mL	5.0000
PFTeDA	Auto	5.582	1540340	4399125	22	5.0561	ng/mL	5.0000
PFTeDA-13C	Auto	5.581	4399125	5239923	26	4.7935	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.581	4399125	4399125	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.230	1797140	1797140	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.230	1797140	5239923	26	4.9284	ng/mL	5.0000
FOSA	Auto	5.230	2417905	1797140	18	5.0242	ng/mL	5.0000
N-MeFOSAA	Auto	5.004	579582	943025	19	4.8819	ng/mL	5.0000
N-MeFOSAA-d3	Auto	5.002	943025	5239923	26	4.8539	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.002	943025	943025	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.621	631771	631771	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.621	631771	5239923	26	4.9080	ng/mL	5.0000
N-MeFOSA	Auto	5.624	835650	631771	1	5.1739	ng/mL	5.0000
N-MeFOSE-d7	Auto	5.593	767766	5239923	26	4.9298	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.593	767766	767766	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.601	1068642	767766	20	5.0579	ng/mL	5.0000

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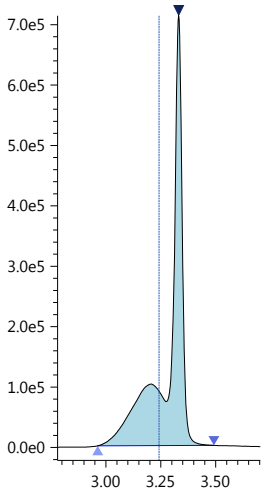
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.102	465187	912415	21	4.9510	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.098	912415	912415	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.098	912415	5239923	26	4.8926	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.760	986511	986511	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.760	986511	5239923	26	4.9082	ng/mL	5.0000
N-EtFOSA	Auto	5.766	161746	986511	23	5.1294	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.726	860721	860721	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.726	860721	5239923	26	5.0135	ng/mL	5.0000
N-EtFOSE	Auto	5.737	896659	860721	24	5.0690	ng/mL	5.0000
13C7-PFUnDA_IS	Auto	5.080	5239923	5239923	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.206	418488	1013777	16	4.4184	ng/mL	4.7046
PFNS	Auto	4.878	374376	664607	13	4.7256	ng/mL	4.8079

PFBA-13C_IS
Conc 5.0000
RT 3.331 Area 2773691
ISTD 216.90>172.15 (-) 7.15e5



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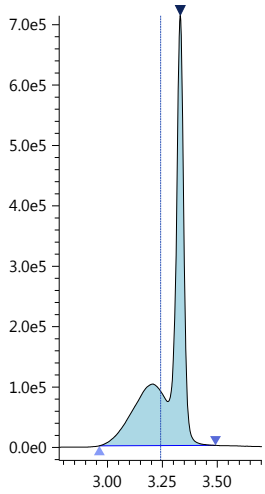
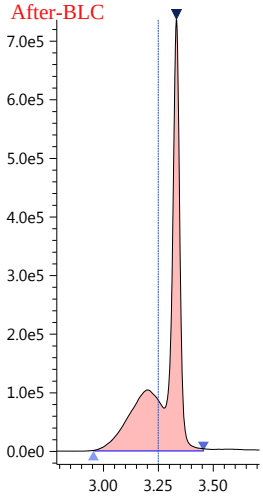
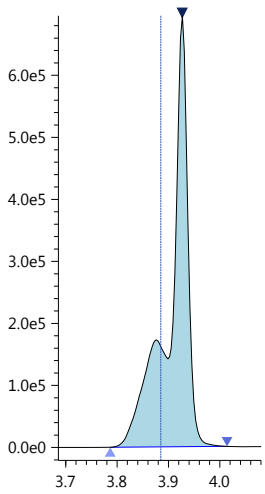
Q 216.90>172.15 (-) 7.15e5



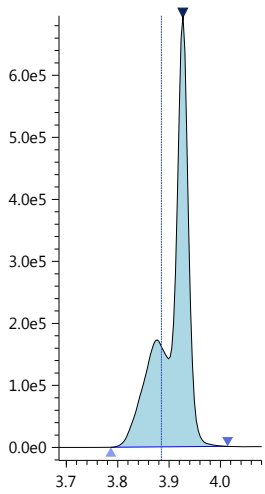
PFBA
Conc 5.0924
RT 3.332 Area 2809106
Q 213.00>169.10 (-) 7.37e5
After-BLC



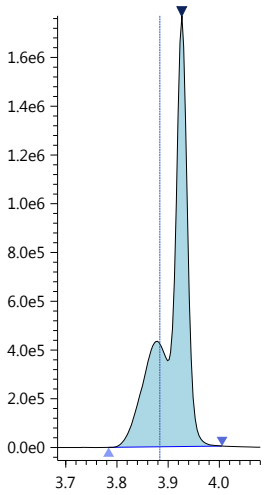
PFPeA-13C_IS
Conc 5.0000
RT 3.927 Area 1692770
ISTD 267.90>223.00 (-) 6.96e5



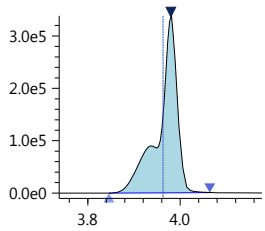
PFPeA-13C
Conc 4.9154
RT 3.927 Area 1692770
Q 267.90>223.00 (-) 6.96e5



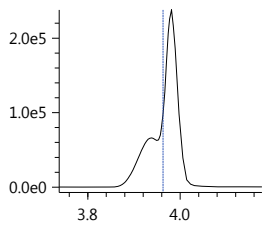
PFPeA
Conc 4.9773
RT 3.927 Area 4284219
Q 263.05>219.10 (-) 1.77e6



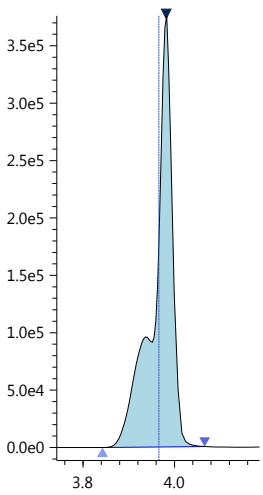
PFBS_1
Conc 4.5020
RT 3.980 Area 918241
R#1 68.27 (0.00)
Q 299.00>80.00 (-) 3.38e5



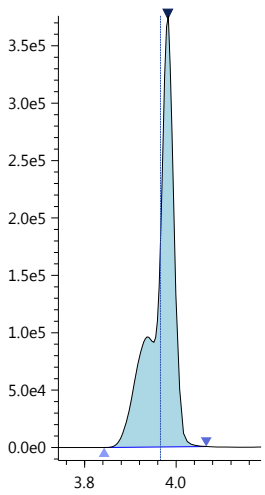
R1 298.80>99.00 (-) 2.38e5



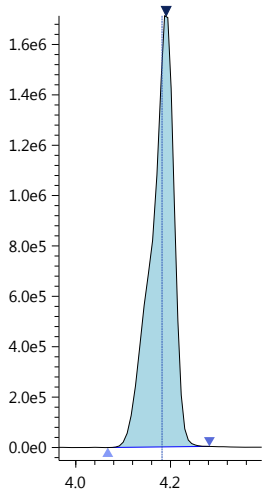
PFBS-13C
Conc 4.9219
RT 3.982 Area 1013777
Q 301.80>80.00 (-) 3.76e5



PFBS-13C_IS
Conc 5.0000
RT 3.982 Area 1013777
ISTD 301.80>80.00 (-) 3.76e5



PFHxA-13C_IS
Conc 5.0000
RT 4.191 Area 5653829
ISTD 314.90>270.10 (-) 1.71e6



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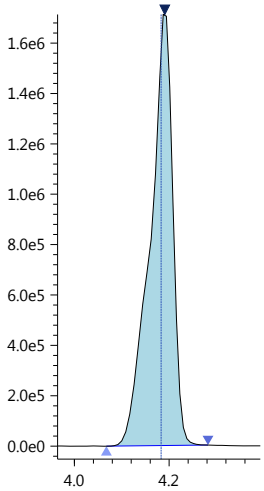
PFHxA-13C

Conc 4.8252
RT 4.191 Area 5653829

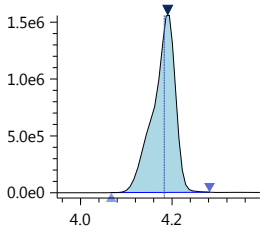
Q 314.90>270.10 (-) 1.71e6



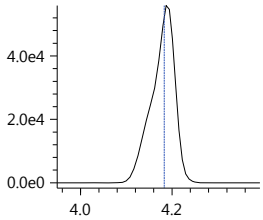
PFHxA

Conc 4.9565
RT 4.191 Area 5190986
R#1 3.62 (0.00)

Q 313.00>269.00 (-) 1.56e6



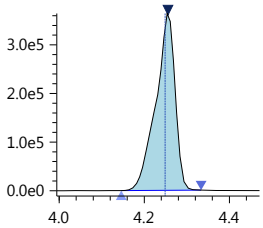
R1 313.00>119.10 (-) 5.59e4



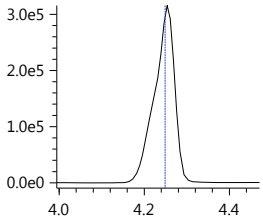
HPFO_DA

Conc 5.1132
RT 4.256 Area 1145033
R#1 86.65 (0.00)

Q 329.00>169.00 (-) 3.65e5



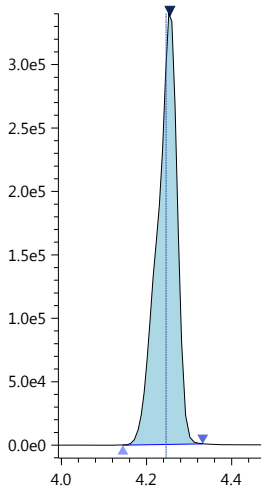
R1 329.00>285.10 (-) 3.16e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.255 Area 1103708

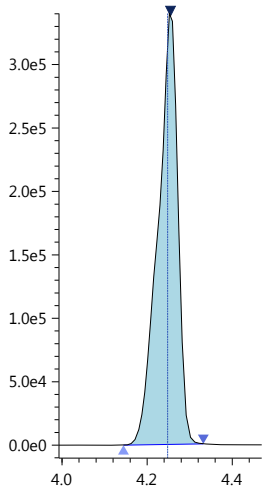
ISTD 332.00>286.80 (-) 3.40e5



HFPO_DA-13C

Conc 5.0198
RT 4.255 Area 1103708

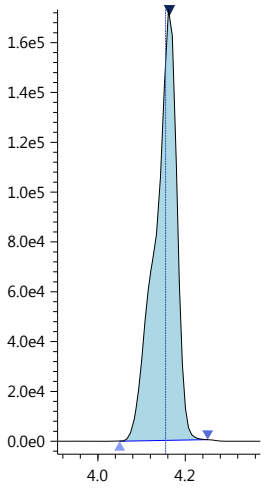
Q 332.00>286.80 (-) 3.40e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.164 Area 590322

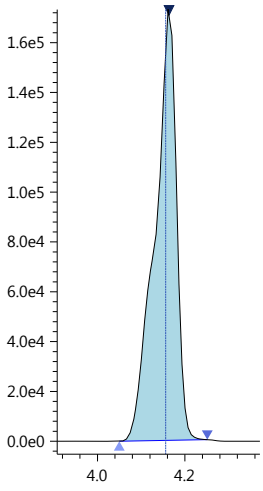
ISTD 328.80>309.05 (-) 1.73e5



4_2-FTS-13C

Conc 5.0280
RT 4.164 Area 590322

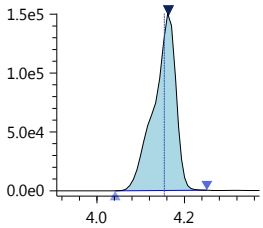
Q 328.80>309.05 (-) 1.73e5



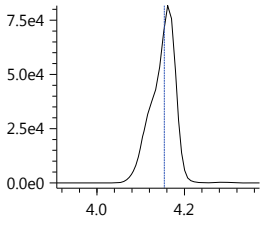
4_2-FTS_1

Conc 4.5941
RT 4.163 Area 523108
R#1 54.36 (0.00)

Q 327.00>307.05 (-) 1.51e5



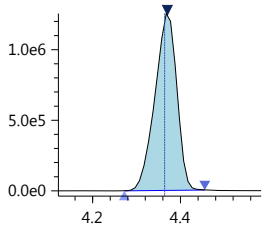
R1 327.00>81.10 (-) 8.17e4



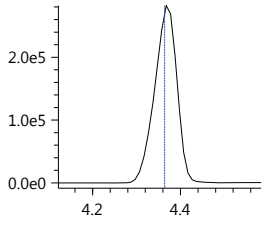
PFHpA

Conc 5.1278
RT 4.370 Area 4344713
R#1 22.48 (0.00)

Q 362.90>319.00 (-) 1.26e6



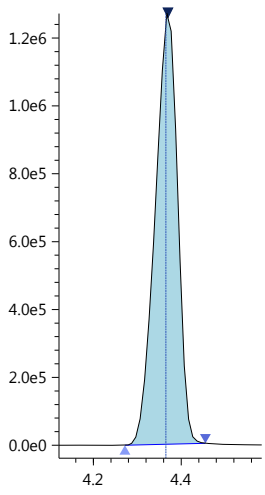
R1 362.90>169.00 (-) 2.82e5



PFHpA-13C_IS

Conc 5.0000
RT 4.370 Area 4518221

ISTD 366.90>322.10 (-) 1.27e6



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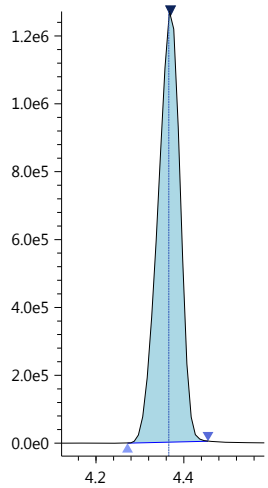
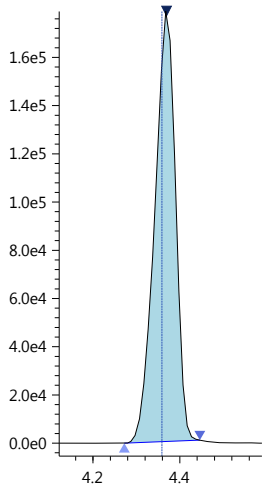
PFHpA-13C
Conc 4.6941
RT 4.370 Area 4518221

Q 366.90>322.10 (-) 1.27e6



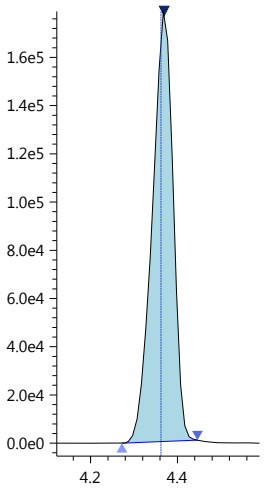
PFHxS-18O_IS
Conc 5.0000
RT 4.369 Area 595395

ISTD 402.70>84.05 (-) 1.79e5



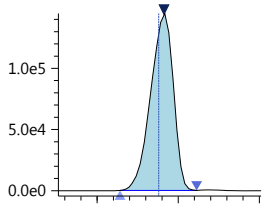
PFHxS-18O
Conc 5.1066
RT 4.369 Area 595395

Q 402.70>84.05 (-) 1.79e5

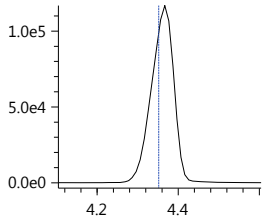


PFHxS_1
Conc 4.7573
RT 4.365 Area 562815
R#1 80.35 (0.00)

Q 399.00>80.00 (-) 1.45e5

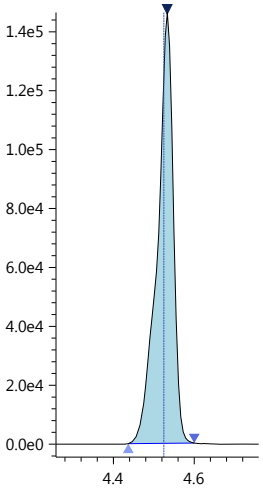


R1 399.00>99.00 (-) 1.17e5



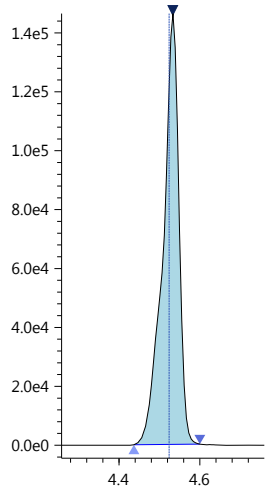
6_2-FTS-13C
Conc 4.8101
RT 4.533 Area 397289

Q 428.90>409.00 (-) 1.47e5



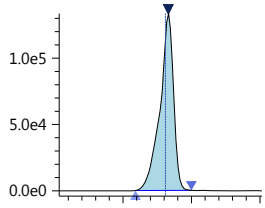
6_2-FTS-13C_IS
Conc 5.0000
RT 4.533 Area 397289

ISTD 428.90>409.00 (-) 1.47e5

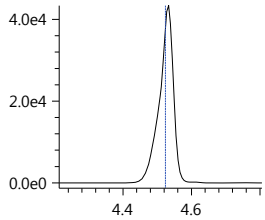


6_2-FTS_1
Conc 4.6538
RT 4.532 Area 365789
R#1 32.41 (0.00)

Q 427.00>407.00 (-) 1.34e5

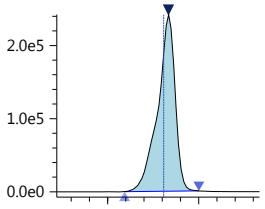


R1 427.00>80.90 (-) 4.34e4

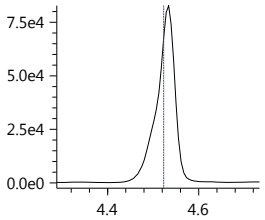


PFHpS_1
Conc 4.4695
RT 4.534 Area 636782
R#1 34.00 (0.00)

Q 449.00>80.15 (-) 2.42e5

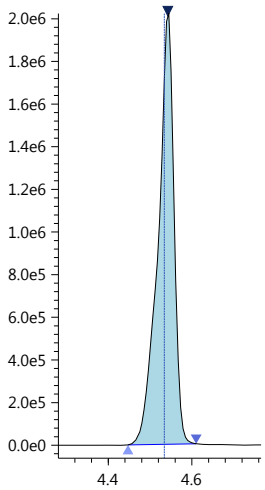


R1 449.00>99.20 (-) 8.28e4



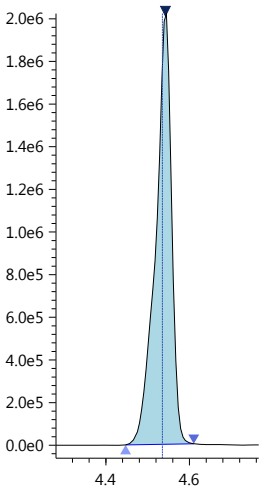
PFOA-13C_IS
Conc 5.0000
RT 4.543 Area 5327831

ISTD 416.80>372.05 (-) 2.02e6



PFOA-13C
Conc 4.8583
RT 4.543 Area 5327831

Q 416.80>372.05 (-) 2.02e6



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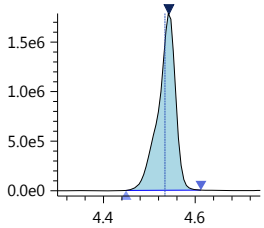
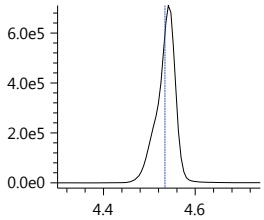
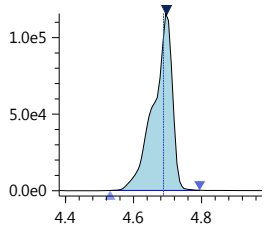
PFOA
Conc 5.1206
RT 4.543 Area 4623110
R#1 39.70 (0.00)
Q 413.00>369.00 (-) 1.79e6



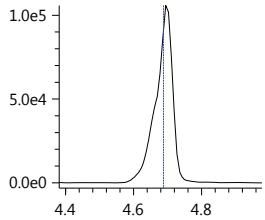
R1 413.00>169.10 (-) 7.10e5



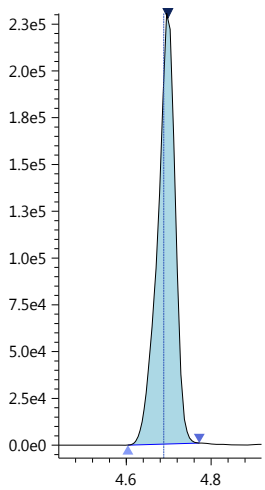
PFOS_1
Conc 4.6702
RT 4.697 Area 444391
R#1 91.30 (0.00)
Q 499.00>80.00 (-) 1.16e5



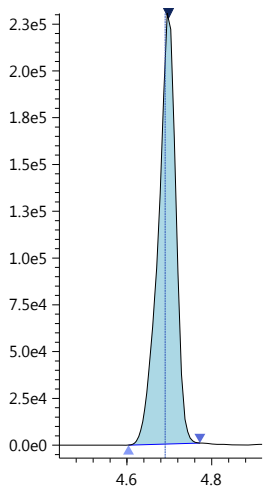
R1 499.00>99.00 (-) 1.06e5



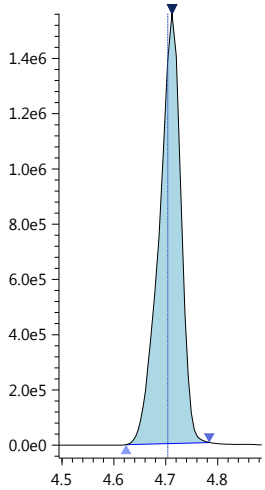
PFOS-13C_IS
Conc 5.0000
RT 4.698 Area 664607
ISTD 502.80>80.05 (-) 2.31e5



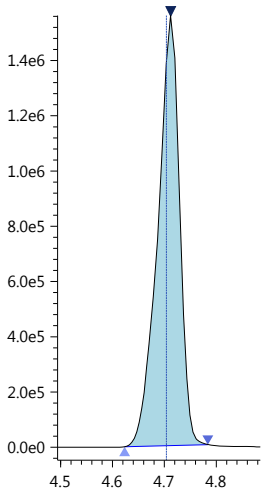
PFOS-13C
Conc 5.0557
RT 4.698 Area 664607
Q 502.80>80.05 (-) 2.31e5



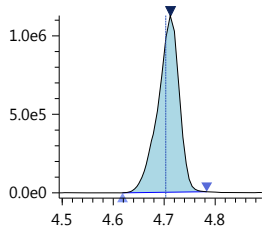
PFNA-13C_IS
Conc 5.0000
RT 4.712 Area 4544337
ISTD 467.80>423.00 (-) 1.56e6



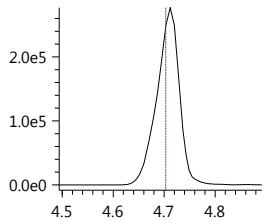
PFNA-13C
Conc 4.8045
RT 4.712 Area 4544337
Q 467.80>423.00 (-) 1.56e6



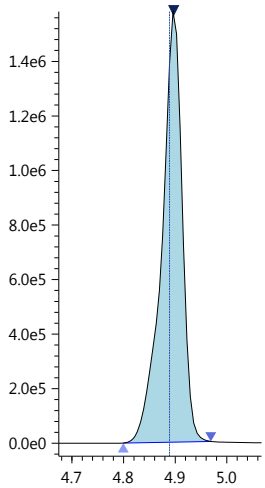
PFNA
Conc 5.0633
RT 4.713 Area 3253156
R#1 24.55 (0.00)
Q 463.00>418.90 (-) 1.13e6



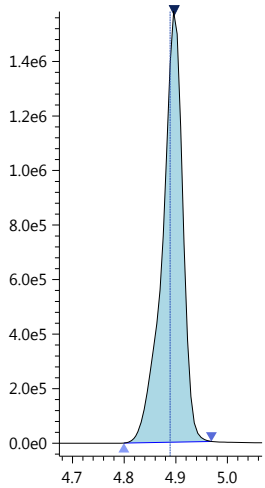
R1 463.00>219.00 (-) 2.77e5



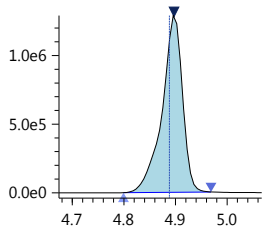
PFDA-13C_IS
Conc 5.0000
RT 4.897 Area 4312647
ISTD 514.80>469.95 (-) 1.58e6



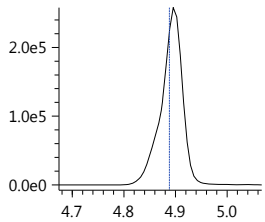
PFDA-13C
Conc 4.9212
RT 4.897 Area 4312647
Q 514.80>469.95 (-) 1.58e6



PFDA
Conc 4.8415
RT 4.897 Area 3528254
R#1 19.98 (0.00)
Q 513.00>468.80 (-) 1.29e6



R1 513.00>219.10 (-) 2.58e5



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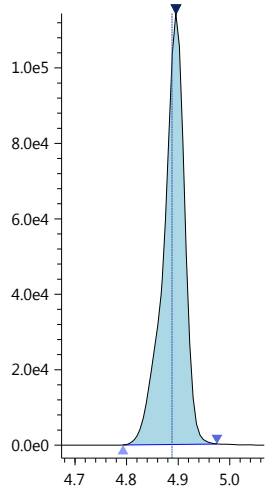
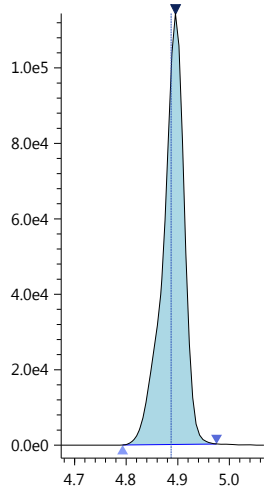
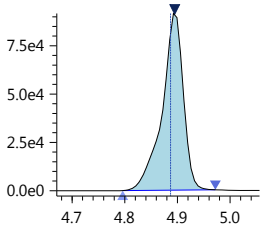
8_2-FTS-13C_IS
Conc 5.0000
RT 4.896 Area 322886
ISTD 528.80>509.00 (-) 1.14e5



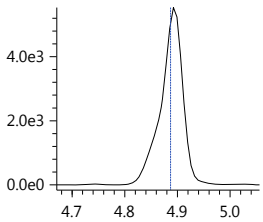
8_2-FTS-13C
Conc 4.9586
RT 4.896 Area 322886
Q 528.80>509.00 (-) 1.14e5



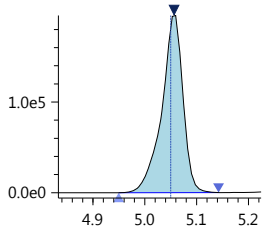
8_2-FTS_1
Conc 4.9811
RT 4.895 Area 255391
R#1 6.05 (0.00)
Q 527.10>506.90 (-) 9.17e4



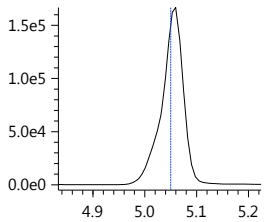
R1 527.20>487.00 (-) 5.54e3



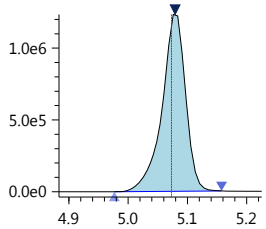
PFDS_1
Conc 4.8460
RT 5.057 Area 555740
R#1 85.36 (0.00)
Q 599.00>79.90 (-) 1.95e5



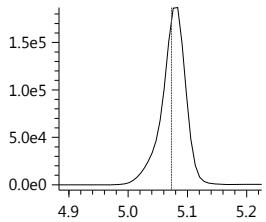
R1 599.00>99.10 (-) 1.67e5



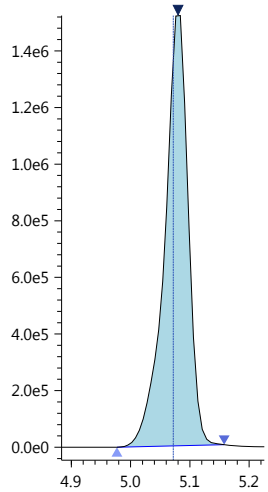
PFUnA
Conc 4.9859
RT 5.079 Area 3400264
R#1 15.10 (0.00)
Q 563.00>518.90 (-) 1.23e6



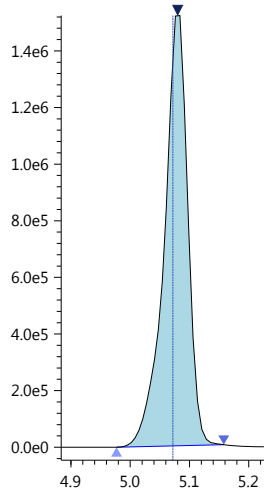
R1 563.00>219.00 (-) 1.87e5



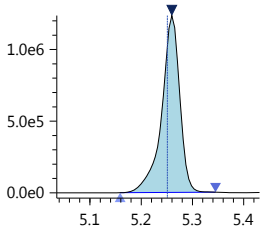
PFUnA-13C_IS
Conc 5.0000
RT 5.080 Area 4214990
ISTD 564.80>519.95 (-) 1.52e6



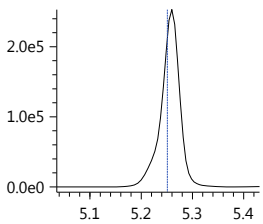
PFUnA-13C
Conc 4.9451
RT 5.080 Area 4214990
Q 564.80>519.95 (-) 1.52e6



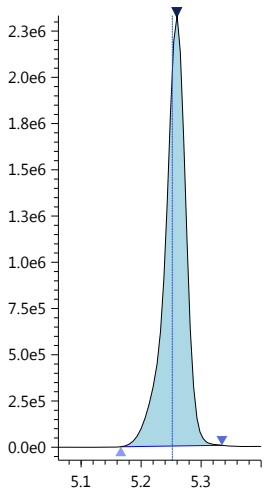
PFDoA
Conc 4.9883
RT 5.260 Area 3016339
R#1 20.45 (0.00)
Q 613.05>569.00 (-) 1.24e6



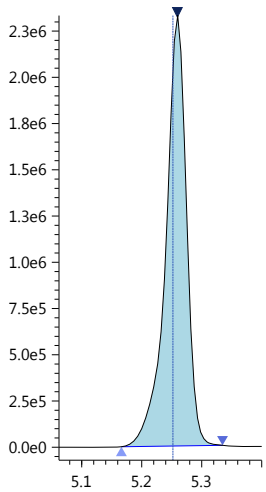
R1 613.05>169.00 (-) 2.53e5



PFDoA-13C
Conc 4.7974
RT 5.259 Area 5589275
Q 614.80>569.95 (-) 2.33e6



PFDoA-13C_IS
Conc 5.0000
RT 5.259 Area 5589275
ISTD 614.80>569.95 (-) 2.33e6



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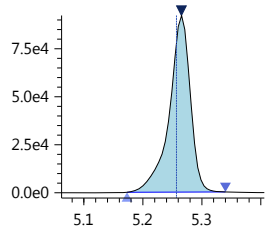
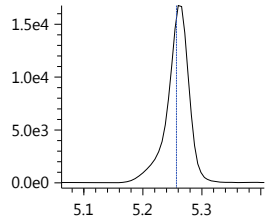
10_2-FtS_1

Conc 4.8112
RT 5.265 Area 227080
R#1 18.03 (0.00)

Q 627.00>606.95 (-) 9.23e4



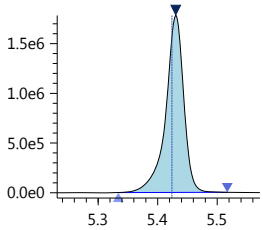
R1 627.00>81.25 (-) 1.68e4



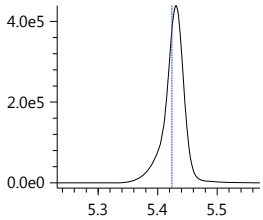
PFTrDA

Conc 4.9060
RT 5.430 Area 3747226
R#1 24.60 (0.00)

Q 663.00>618.90 (-) 1.78e6



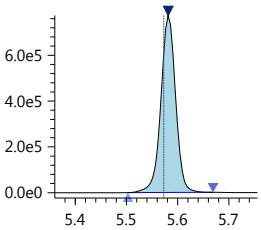
R1 662.90>169.00 (-) 4.39e5



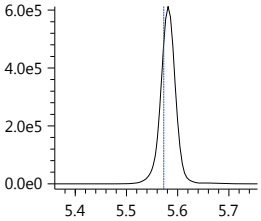
PFTeDA

Conc 5.0561
RT 5.582 Area 1540340
R#1 79.34 (0.00)

Q 713.40>669.00 (-) 7.74e5



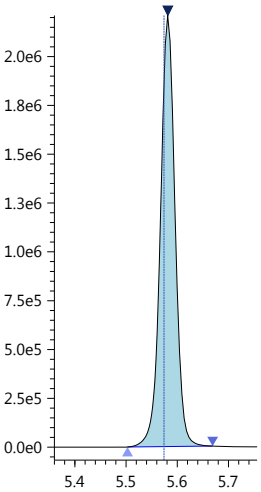
R1 713.40>169.10 (-) 6.12e5



PFTeDA-13C

Conc 4.7935
RT 5.581 Area 4399125

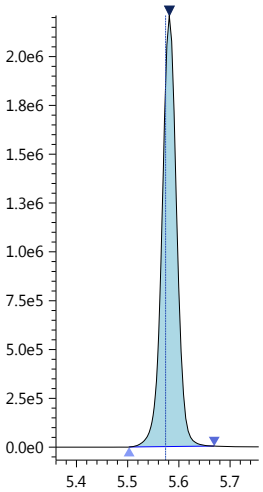
Q 714.70>669.90 (-) 2.21e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.581 Area 4399125

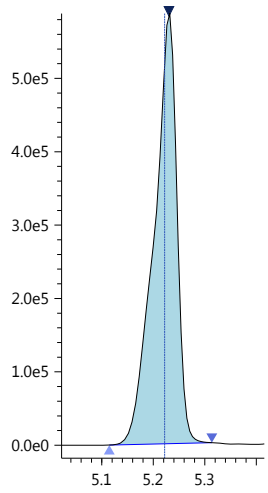
ISTD 714.70>669.90 (-) 2.21e6



FOSA-13C_IS

Conc 5.0000
RT 5.230 Area 1797140

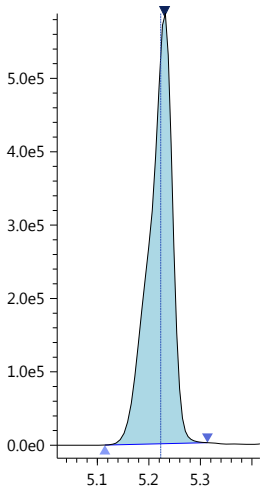
ISTD 506.00>78.05 (-) 5.88e5



FOSA-13C

Conc 4.9284
RT 5.230 Area 1797140

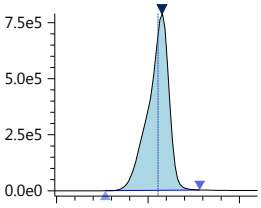
Q 506.00>78.05 (-) 5.88e5



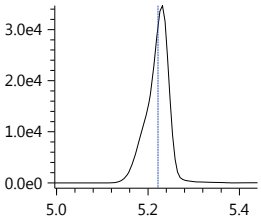
FOSA

Conc 5.0242
RT 5.230 Area 2417905
R#1 4.41 (0.00)

Q 498.20>78.00 (-) 7.91e5



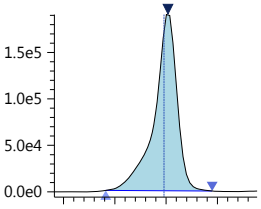
R1 498.20>64.10 (-) 3.47e4



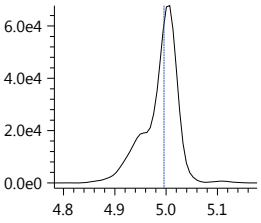
N-MeFOSAA

Conc 4.8819
RT 5.004 Area 579582
R#1 35.47 (0.00)

Q 570.20>419.00 (-) 1.91e5



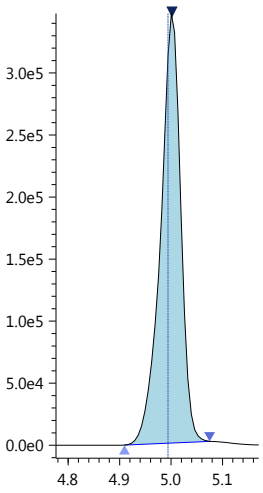
R1 570.20>512.00 (-) 6.78e4



N-MeFOSAA-d3

Conc 4.8539
RT 5.002 Area 943025

Q 572.80>419.05 (-) 3.48e5



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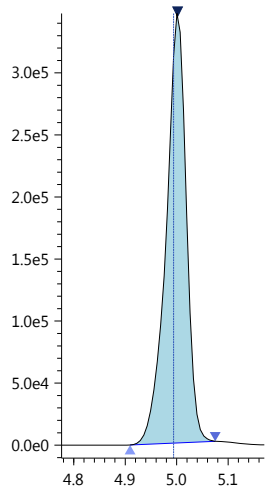
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.002 Area 943025

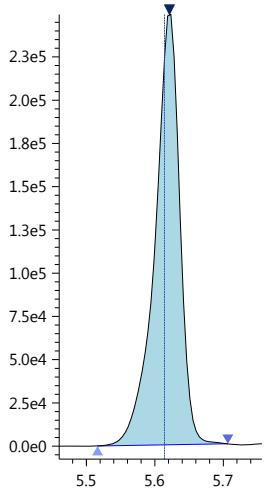
ISTD 572.80>419.05 (-) 3.48e5



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.621 Area 631771

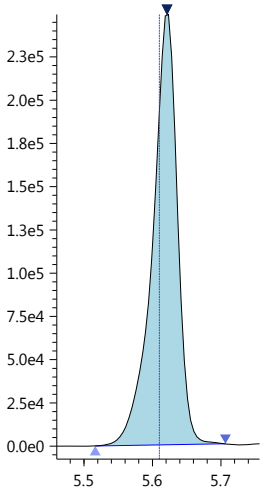
ISTD 514.90>168.90 (-) 2.50e5



N-MeFOSA-d3

Conc 4.9080
RT 5.621 Area 631771

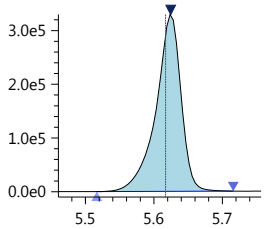
Q 514.90>168.90 (-) 2.50e5



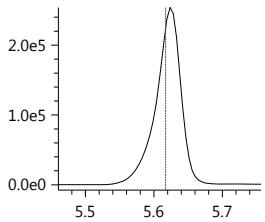
N-MeFOSA

Conc 5.1739
RT 5.624 Area 835650
R#1 77.01 (0.00)

Q 512.00>169.10 (-) 3.30e5



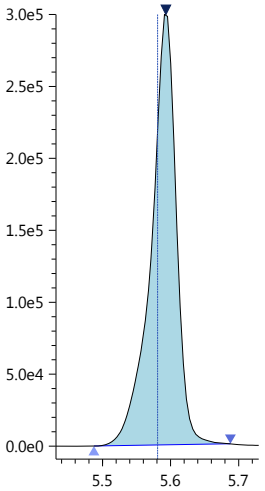
R1 512.00>219.00 (-) 2.54e5



N-MeFOSE-d7

Conc 4.9298
RT 5.593 Area 767766

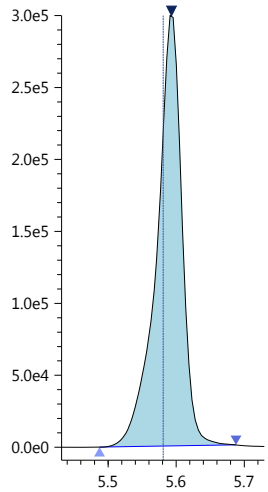
Q 622.70>59.10 (-) 3.00e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.593 Area 767766

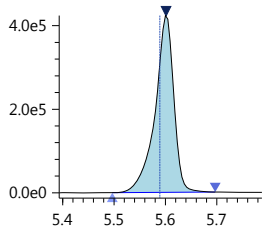
ISTD 622.70>59.10 (-) 3.00e5



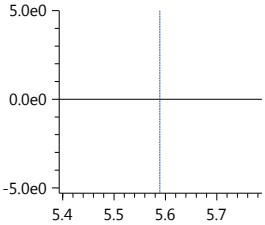
N-MeFOSE

Conc 5.0579
RT 5.601 Area 1068642
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 4.24e5



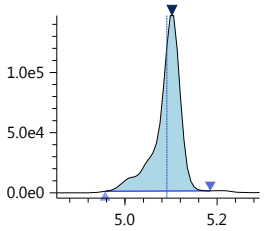
R1 556.00>121.20 (-) 0.00e0



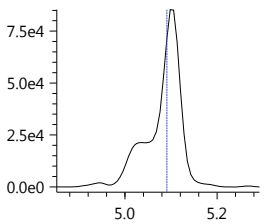
N-EtFOSAA

Conc 4.9510
RT 5.102 Area 465187
R#1 57.67 (0.00)

Q 584.20>418.95 (-) 1.47e5



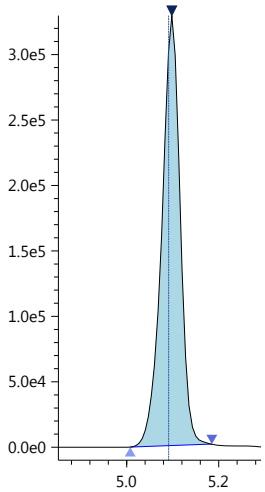
R1 584.20>526.10 (-) 8.54e4



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.098 Area 912415

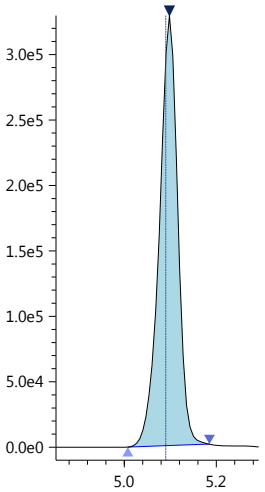
ISTD 588.80>419.00 (-) 3.30e5



N-EtFOSAA-d5

Conc 4.8926
RT 5.098 Area 912415

Q 588.80>419.00 (-) 3.30e5



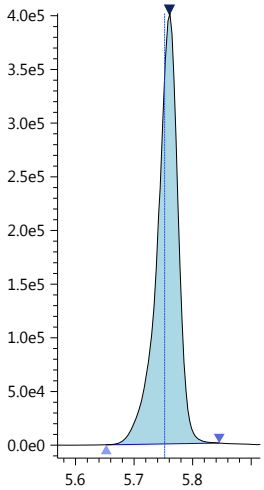
Insight Report

Printed at 1/21/2019 10:49:39 AM

N-EtFOSA-d9_IS

Conc 5.0000
RT 5.760 Area 986511

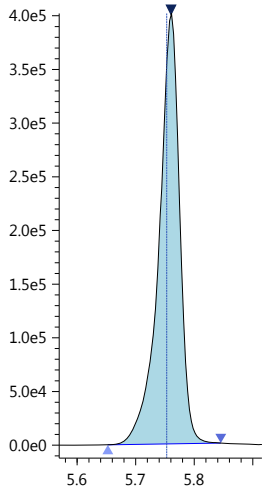
ISTD 530.90>169.15 (-) 4.02e5



N-EtFOSA-d9

Conc 4.9082
RT 5.760 Area 986511

Q 530.90>169.15 (-) 4.02e5



N-EtFOSA

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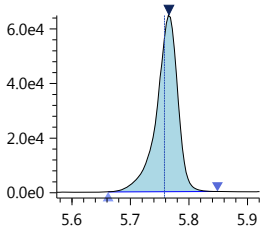
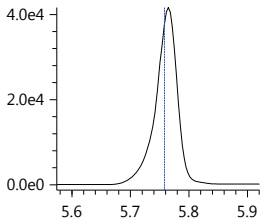
RT 5.766 Area 161746
R#1 64.42 (0.00)

Q 526.90>169.10 (-) 6.49e4



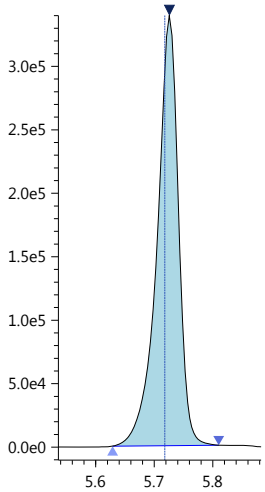
R1 526.90>219.00 (-) 4.16e4



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.726 Area 860721

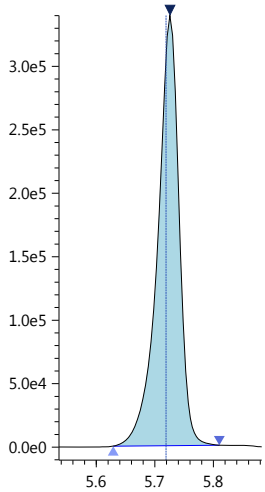
ISTD 638.70>59.10 (-) 3.40e5



N-EtFOSE-d9

Conc 5.0135
RT 5.726 Area 860721

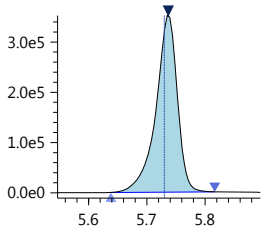
Q 638.70>59.10 (-) 3.40e5



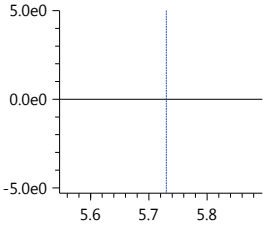
N-EtFOSE

Conc 5.0690
RT 5.737 Area 896659
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 3.53e5



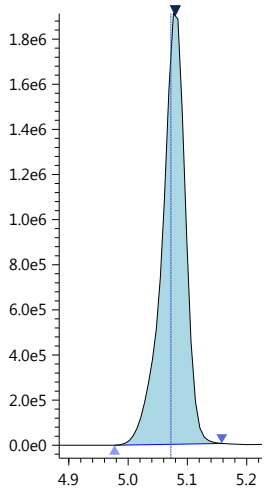
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.080 Area 5239923

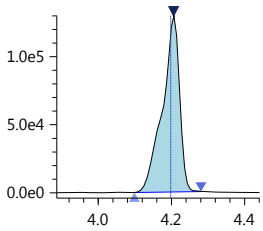
ISTD 570.00>525.00 (-) 1.91e6



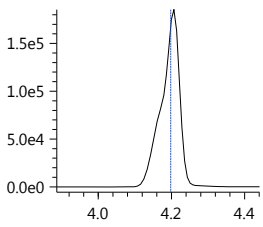
PFPeS

Conc 4.4184
RT 4.206 Area 418488
R#1 143.85 (0.00)

Q 349.00>99.00 (-) 1.30e5



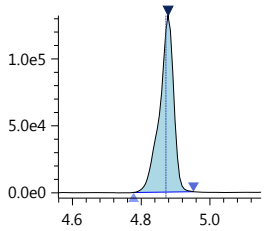
R1 349.00>79.95 (-) 1.85e5



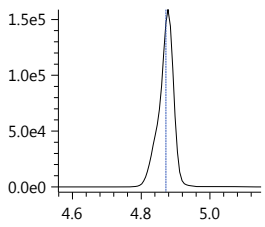
PFNS

Conc 4.7256
RT 4.878 Area 374376
R#1 120.04 (0.00)

Q 549.00>99.00 (-) 1.32e5



R1 549.00>79.95 (-) 1.59e5



Insight Report

Printed at 1/21/2019 9:31:25 AM

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Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_027.lcd
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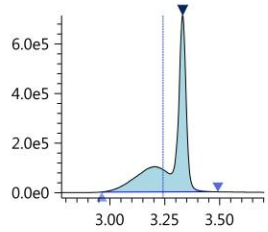
PFBA-13C_IS
Conc 5.0000
RT 3.331 Area 2773691
ISTD 216.90>172.15 (-) 7.15e5



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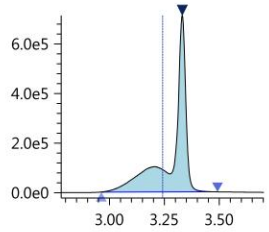
Q 216.90>172.15 (-) 7.15e5



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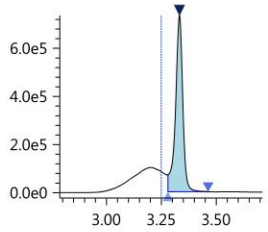
Q 213.00>169.10 (-) 7.37e5



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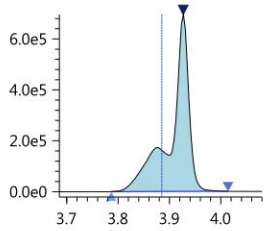
Conc 5.0000
RT 3.927 Area 1692770
ISTD 267.90>223.00 (-) 6.96e5



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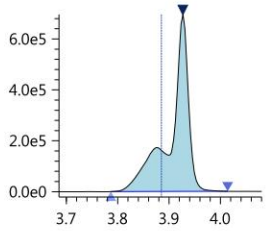
Q 267.90>223.00 (-) 6.96e5



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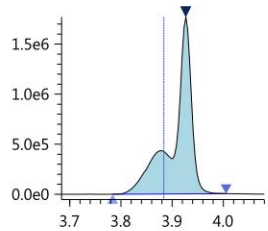
Conc 1.0988
RT 3.927 Area 4284219
Q 263.05>219.10 (-) 1.77e6



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Conc 0.9846
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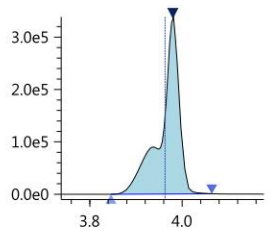
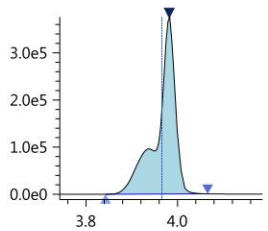
Q 299.00>80.00 (-) 3.38e5



PFBS-13C
Conc 4.9219
RT 3.982 Area 1013777
Q 301.80>80.00 (-) 3.76e5



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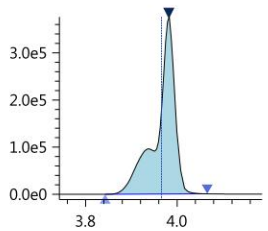

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Conc 5.0000
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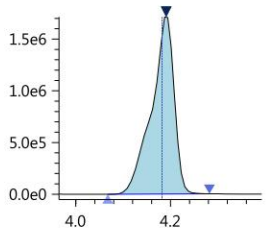

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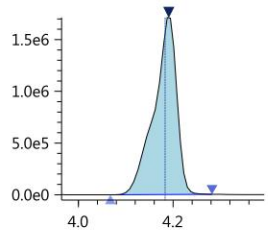
RT 4.191 Area 5653829
Q 314.90>270.10 (-) 1.71e6



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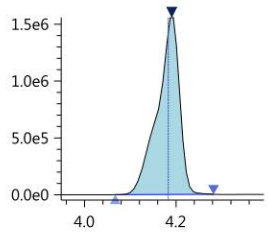
Conc 1.0963
RT 4.191 Area 5190986
Q 313.00>269.00 (-) 1.56e6



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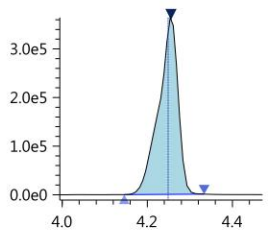
Conc 1.0829
RT 4.256 Area 1145033
Q 329.00>169.00 (-) 3.65e5



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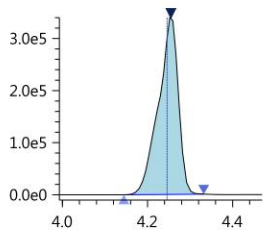
Conc 5.0000
RT 4.255 Area 1103708
ISTD 332.00>286.80 (-) 3.40e5



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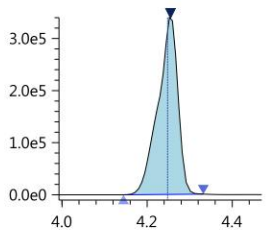

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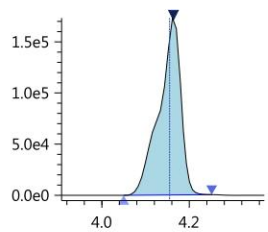
Conc 5.0000
RT 4.164 Area 590322
ISTD 328.80>309.05 (-) 1.73e5



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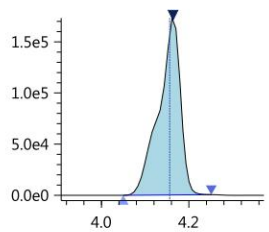
Q 328.80>309.05 (-) 1.73e5



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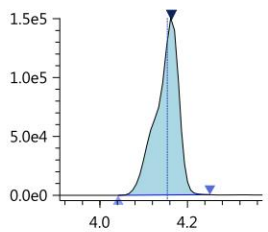
RT 4.163 Area 523108
Q 327.00>307.05 (-) 1.51e5



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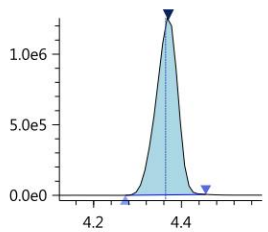
Conc 1.1173
RT 4.370 Area 4344713
Q 362.90>319.00 (-) 1.26e6



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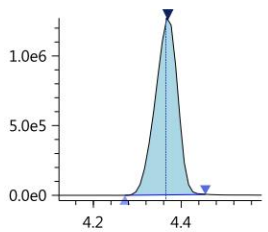

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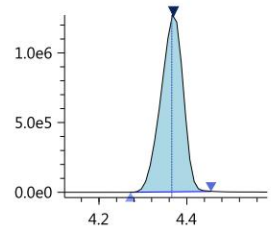
Q 366.90>322.10 (-) 1.27e6



PFHxS-18O_IS
Conc 5.0000
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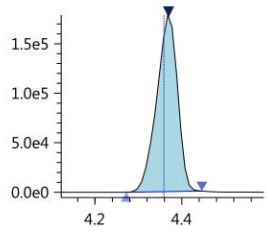
ISTD 402.70>84.05 (-) 1.79e5



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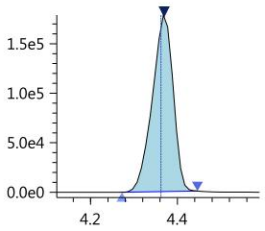
Q 402.70>84.05 (-) 1.79e5



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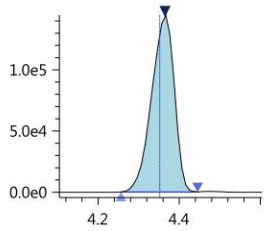
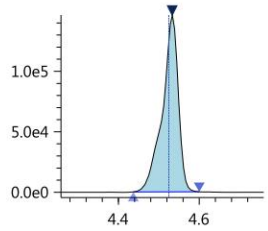
Conc 1.0506
RT 4.365 Area 562815
Q 399.00>80.00 (-) 1.45e5



6_2-FTS-13C
Conc 4.8101
RT 4.533 Area 397289
Q 428.90>409.00 (-) 1.47e5



6_2-FTS-13C_IS
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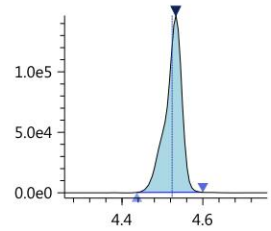
ISTD 428.90>409.00 (-) 1.47e5



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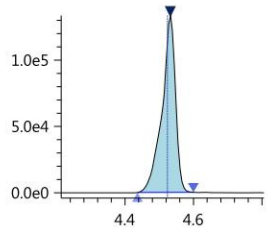
Conc 1.1089
RT 4.532 Area 365789
Q 427.00>407.00 (-) 1.34e5



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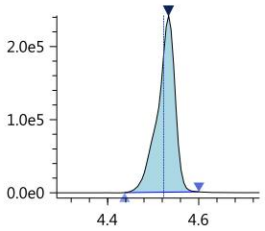
Conc 0.9519
RT 4.534 Area 636782
Q 449.00>80.15 (-) 2.42e5



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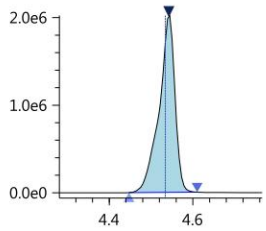
ISTD 416.80>372.05 (-) 2.02e6



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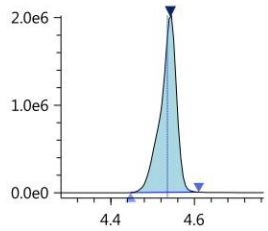
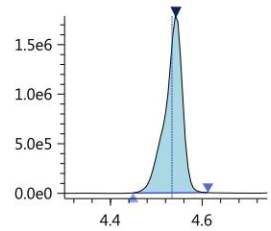
Q 416.80>372.05 (-) 2.02e6



PFOA
Conc 1.1324
RT 4.543 Area 4623110
Q 413.00>369.00 (-) 1.79e6



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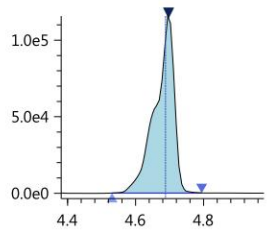
Conc 1.0159
RT 4.697 Area 444391
Q 499.00>80.00 (-) 1.16e5



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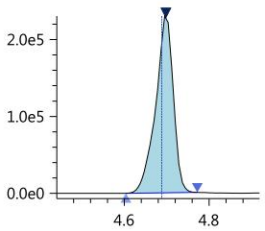
Conc 5.0000
RT 4.698 Area 664607
ISTD 502.80>80.05 (-) 2.31e5



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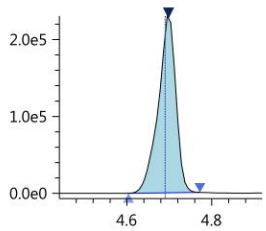
RT 4.698 Area 664607
Q 502.80>80.05 (-) 2.31e5



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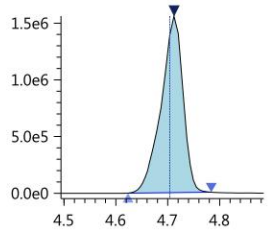
Conc 5.0000
RT 4.712 Area 4544337
ISTD 467.80>423.00 (-) 1.56e6



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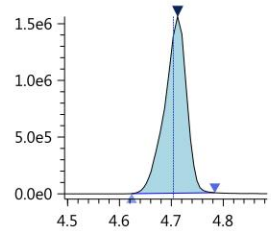
Conc 4.8045
RT 4.712 Area 4544337
Q 467.80>423.00 (-) 1.56e6



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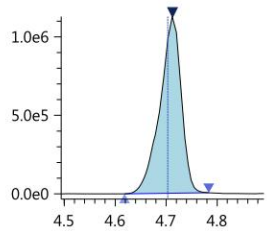
Conc 1.0945
RT 4.713 Area 3253156
Q 463.00>418.90 (-) 1.13e6



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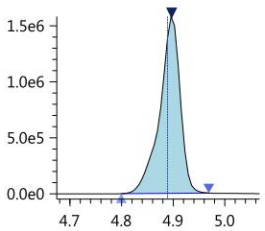
RT 4.897 Area 4312647
ISTD 514.80>469.95 (-) 1.58e6



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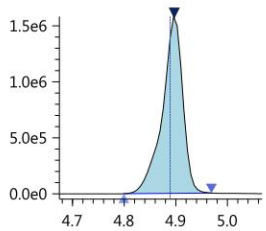

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Conc 1.0642
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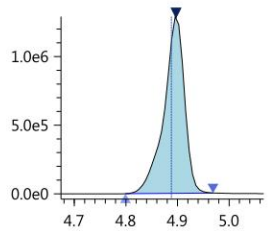
Q 513.00>468.80 (-) 1.29e6



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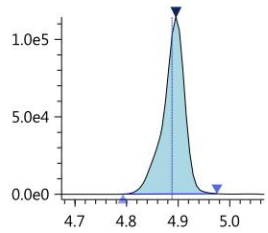
8_2-FTS-13C_IS
Conc 5.0000
RT 4.896 Area 322886
ISTD 528.80>509.00 (-) 1.14e5



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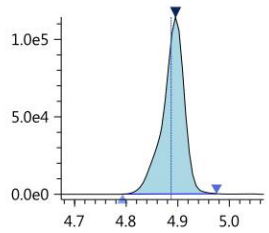

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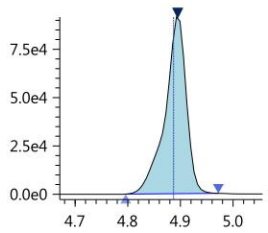

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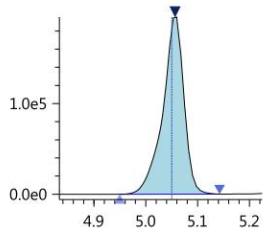

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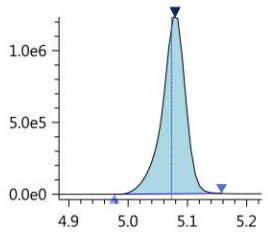

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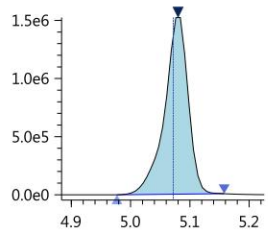

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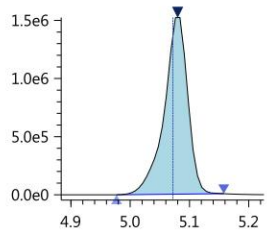

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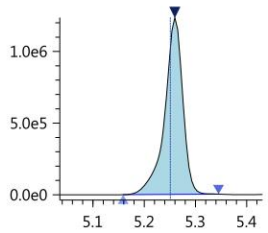
Q 613.05>569.00 (-) 1.24e6



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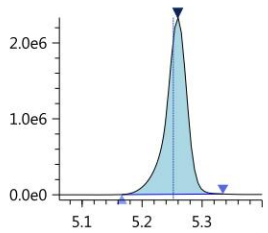

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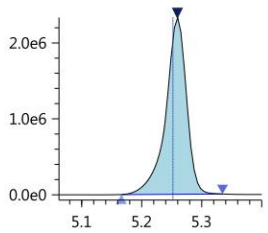
ISTD 614.80>569.95 (-) 2.33e6



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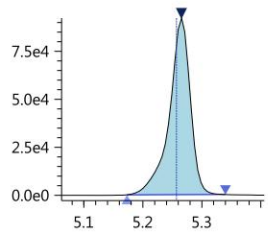

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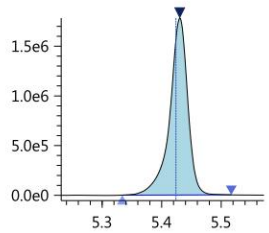

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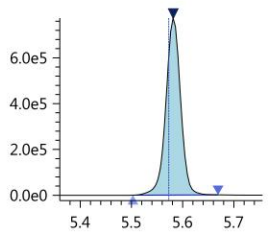

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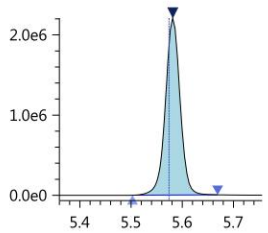

PFTeDA-13C_IS
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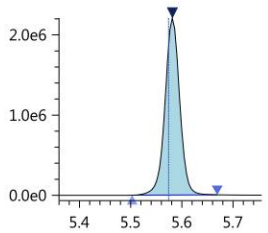
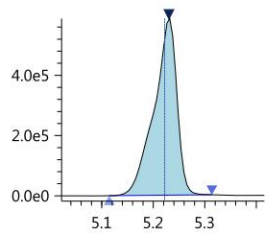
ISTD 714.70>669.90 (-) 2.21e6



FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1797140
ISTD 506.00>78.05 (-) 5.88e5



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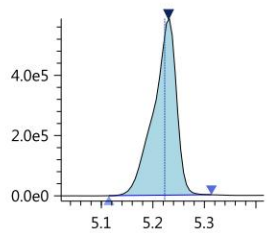
Q 506.00>78.05 (-) 5.88e5



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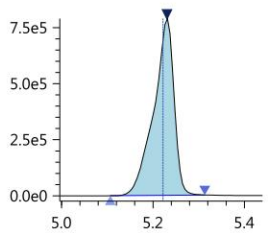
Conc 1.1035
RT 5.230 Area 2417905
Q 498.20>78.00 (-) 7.91e5



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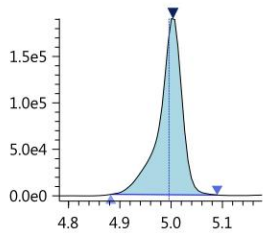
Conc 1.1175
RT 5.004 Area 579582
Q 570.20>419.00 (-) 1.91e5



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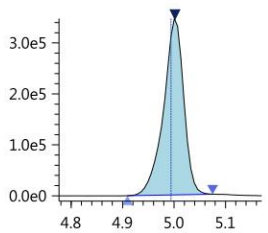

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N-MeFOSAA-d3_IS
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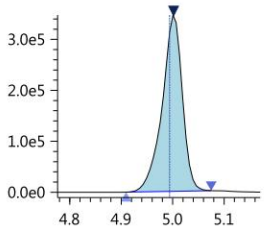
ISTD 572.80>419.05 (-) 3.48e5



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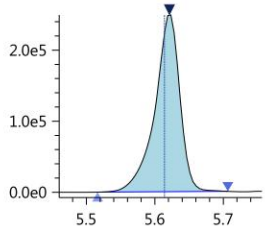
Conc 5.0000
RT 5.621 Area 631771
ISTD 514.90>168.90 (-) 2.50e5



N-MeFOSA-d3
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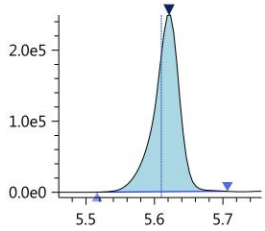
RT 5.621 Area 631771
Q 514.90>168.90 (-) 2.50e5



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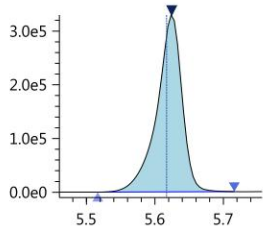
Q 512.00>169.10 (-) 3.30e5



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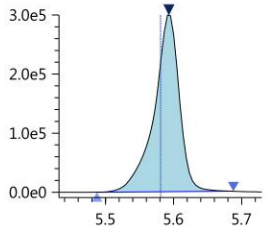
Q 622.70>59.10 (-) 3.00e5



N-MeFOSE-d7_IS
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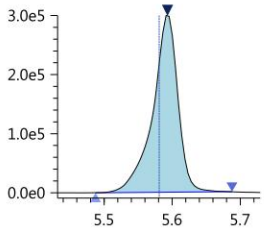
ISTD 622.70>59.10 (-) 3.00e5



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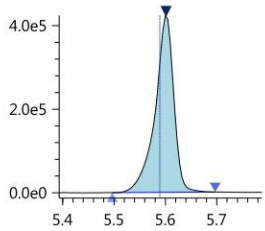
Conc 1.0948
RT 5.601 Area 1068642
Q 616.00>59.00 (-) 4.24e5



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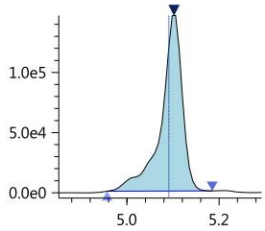
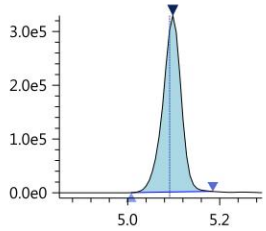
Conc 1.0979
RT 5.102 Area 465187
Q 584.20>418.95 (-) 1.47e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.098 Area 912415
ISTD 588.80>419.00 (-) 3.30e5



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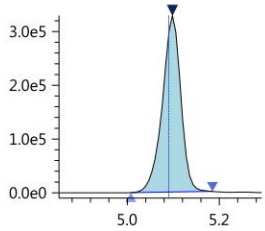
Q 588.80>419.00 (-) 3.30e5



N-EtFOSA-d9_IS
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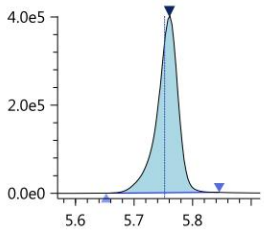
ISTD 530.90>169.15 (-) 4.02e5



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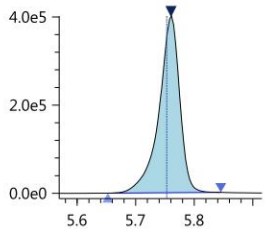
Q 530.90>169.15 (-) 4.02e5



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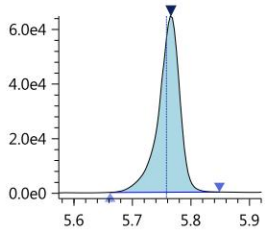
Q 526.90>169.10 (-) 6.49e4



N-EtFOSE-d9_IS
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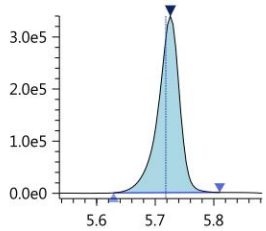
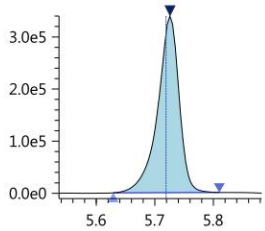
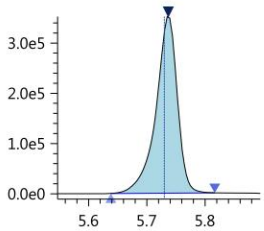
ISTD 638.70>59.10 (-) 3.40e5



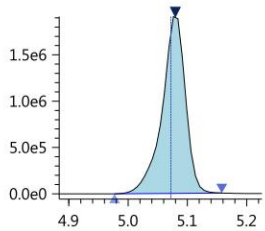
N-EtFOSE-d9
Conc 5.0135
RT 5.726 Area 860721
Q 638.70>59.10 (-) 3.40e5



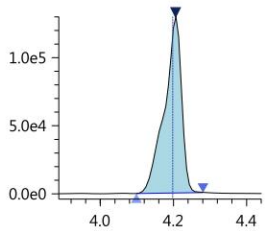
N-EtFOSE
Conc 1.0990
RT 5.737 Area 896659
Q 630.00>58.90 (-) 3.53e5



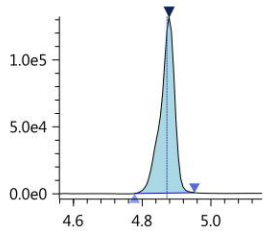
13C7-PFUnDA_IS
Conc 5.0000
RT 5.080 Area 5239923
ISTD 570.00>525.00 (-) 1.91e6



PFPeS
Conc 1.0098
RT 4.206 Area 418488
Q 349.00>99.00 (-) 1.30e5



PFNS
Conc 1.0520
RT 4.878 Area 374376
Q 549.00>99.00 (-) 1.32e5



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_028

Sample ID: 10.0 PPB ICAL
Date acquired: 1/18/2019 6:39:27 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_028.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.325	2787154	2787154	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.325	2787154	4927105	26	5.2406	ng/mL	5.0000
PFBA	Auto	3.203	5609294	2787154	2	10.1194	ng/mL	10.0000
PFPeA-13C_IS	Auto	3.919	1679950	1679950	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.919	1679950	4927105	26	5.1879	ng/mL	5.0000
PFPeA	Auto	3.920	8484652	1679950	4	10.0230	ng/mL	10.0000
PFBS_1	Auto	3.973	1830521	995565	16	9.1390	ng/mL	8.8737
PFBS-13C	Auto	3.974	995565	4927105	26	5.1404	ng/mL	5.0000
PFBS-13C_IS	Auto	3.974	995565	995565	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.184	5391118	5391118	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.184	5391118	4927105	26	4.8931	ng/mL	5.0000
PFHxA	Auto	4.184	10250071	5391118	6	10.2620	ng/mL	10.0000
HPFO_DA	Auto	4.248	2218891	1024111	3	10.6787	ng/mL	10.0000
HFPO_DA-13C_IS	Auto	4.248	1024111	1024111	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.248	1024111	4927105	26	4.9535	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.156	568895	568895	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.156	568895	4927105	26	5.1532	ng/mL	5.0000
4_2-FTS_1	Auto	4.155	1000974	568895	5	9.1220	ng/mL	9.3722
PFHpA	Auto	4.366	9180484	4754458	8	10.2879	ng/mL	10.0000
PFHpA-13C_IS	Auto	4.366	4754458	4754458	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.366	4754458	4927105	26	5.2531	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.363	526822	526822	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.363	526822	4927105	26	4.8053	ng/mL	5.0000
PFHxS_1	Auto	4.361	965058	526822	7	9.2191	ng/mL	9.1308
6_2-FTS-13C	Auto	4.525	399003	4927105	26	5.1376	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.525	399003	399003	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.525	699601	399003	10	8.8624	ng/mL	9.5117
PFHpS_1	Auto	4.526	1309976	526822	7	10.3914	ng/mL	9.5344
PFOA-13C_IS	Auto	4.536	5242110	5242110	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.536	5242110	4927105	26	5.0836	ng/mL	5.0000
PFOA	Auto	4.536	8823279	5242110	9	9.9365	ng/mL	10.0000
PFOS_1	Auto	4.690	857440	621274	13	9.6395	ng/mL	9.2923
PFOS-13C_IS	Auto	4.690	621274	621274	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.690	621274	4927105	26	5.0261	ng/mL	5.0000
PFNA-13C_IS	Auto	4.705	4665008	4665008	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.705	4665008	4927105	26	5.2452	ng/mL	5.0000
PFNA	Auto	4.705	6694772	4665008	11	10.1454	ng/mL	10.0000
PFDA-13C_IS	Auto	4.890	4205609	4205609	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.890	4205609	4927105	26	5.1037	ng/mL	5.0000
PFDA	Auto	4.891	7346364	4205609	12	10.3374	ng/mL	10.0000
8_2-FTS-13C_IS	Auto	4.888	294250	294250	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.888	294250	4927105	26	4.8057	ng/mL	5.0000
8_2-FTS_1	Auto	4.888	476099	294250	15	10.1893	ng/mL	9.6004
PFDS_1	Auto	5.050	1074269	621274	13	10.0208	ng/mL	9.6467
PFUnA	Auto	5.073	6498572	4025241	14	9.9835	ng/mL	10.0000
PFUnA-13C_IS	Auto	5.073	4025241	4025241	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.073	4025241	4927105	26	5.0223	ng/mL	5.0000
PFDoA	Auto	5.253	5971808	5481919	17	10.0666	ng/mL	10.0000
PFDoA-13C	Auto	5.253	5481919	4927105	26	5.0039	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.253	5481919	5481919	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.259	428813	294250	15	9.9695	ng/mL	9.6619
PFTrDA	Auto	5.424	7901945	4434745	22	10.2587	ng/mL	10.0000
PFTeDA	Auto	5.575	3071268	4434745	22	10.0927	ng/mL	10.0000
PFTeDA-13C	Auto	5.575	4434745	4927105	26	5.1391	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.575	4434745	4434745	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.224	1741238	1741238	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.224	1741238	4927105	26	5.0782	ng/mL	5.0000
FOSA	Auto	5.224	4782677	1741238	18	10.2570	ng/mL	10.0000
N-MeFOSAA	Auto	4.998	1192464	975290	19	9.7120	ng/mL	10.0000
N-MeFOSAA-d3	Auto	4.995	975290	4927105	26	5.3387	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.995	975290	975290	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.615	621897	621897	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.615	621897	4927105	26	5.1380	ng/mL	5.0000
N-MeFOSA	Auto	5.618	1669732	621897	1	10.5023	ng/mL	10.0000
N-MeFOSE-d7	Auto	5.587	746907	4927105	26	5.1003	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.587	746907	746907	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.595	2083466	746907	20	10.1365	ng/mL	10.0000

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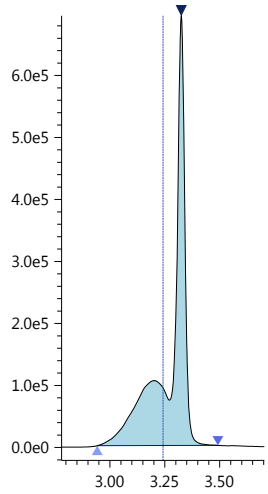
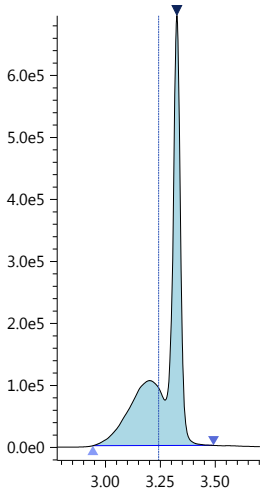
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.095	925851	905589	21	9.9148	ng/mL	10.0000
N-EtFOSAA-d5_IS	Auto	5.092	905589	905589	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.092	905589	4927105	26	5.1643	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.754	988282	988282	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.754	988282	4927105	26	5.2292	ng/mL	5.0000
N-EtFOSA	Auto	5.760	332514	988282	23	10.5261	ng/mL	10.0000
N-EtFOSE-d9_IS	Auto	5.719	847694	847694	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.719	847694	4927105	26	5.2511	ng/mL	5.0000
N-EtFOSE	Auto	5.731	1775914	847694	24	10.1939	ng/mL	10.0000
13C7-PFUnDA_IS	Auto	5.073	4927105	4927105	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.199	877139	995565	16	9.4303	ng/mL	9.4092
PFNS	Auto	4.871	725950	621274	13	9.8026	ng/mL	9.6158

PFBA-13C_IS
Conc 5.0000
RT 3.325 Area 2787154
ISTD 216.90>172.15 (-) 6.96e5



PFBA-13C
Conc 5.2406
RT 3.325 Area 2787154
Q 216.90>172.15 (-) 6.96e5



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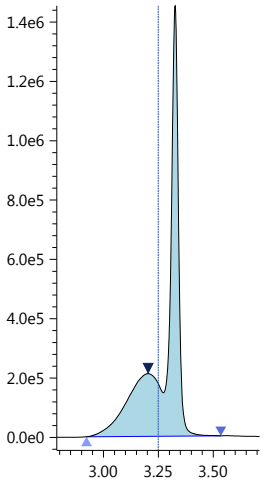
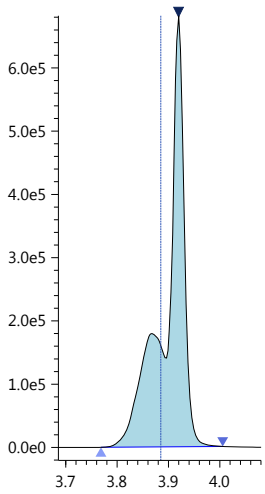
Conc 10.1194
RT 3.203 Area 5609294
Q 213.00>169.10 (-) 1.45e6



PFPeA-13C_IS
Conc 5.0000
RT 3.919 Area 1679950
ISTD 267.90>223.00 (-) 6.82e5



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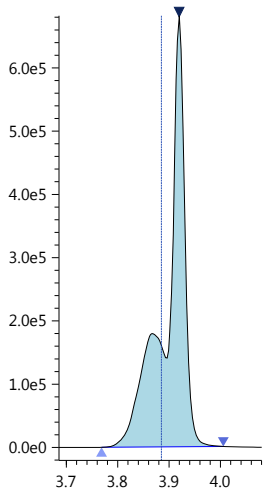
RT 3.919 Area 1679950
Q 267.90>223.00 (-) 6.82e5



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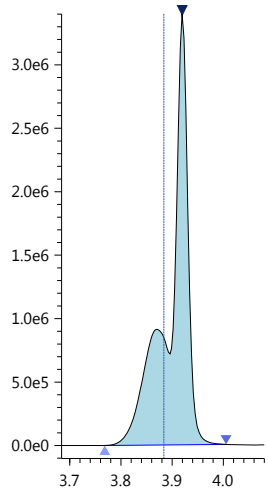
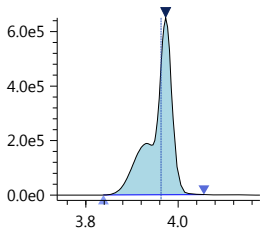
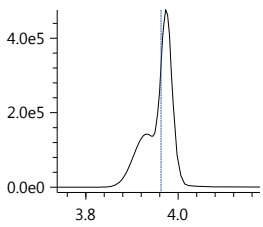
Conc 10.0230
RT 3.920 Area 8484652
Q 263.05>219.10 (-) 3.40e6



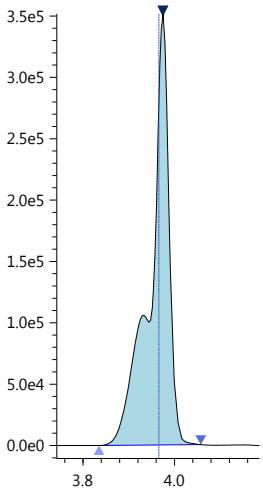
PFBS_1
Conc 9.1390
RT 3.973 Area 1830521
R#1 73.18 (0.00)
Q 299.00>80.00 (-) 6.50e5



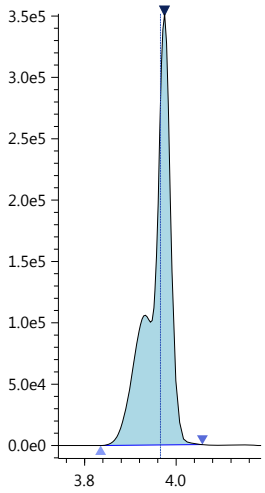
R1 298.80>99.00 (-) 4.76e5



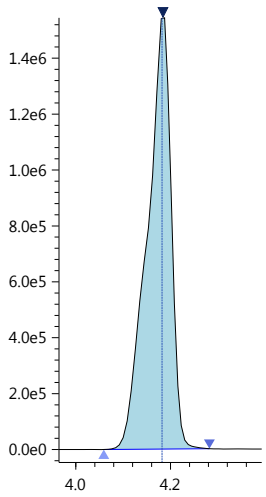
PFBS-13C
Conc 5.1404
RT 3.974 Area 995565
Q 301.80>80.00 (-) 3.52e5



PFBS-13C_IS
Conc 5.0000
RT 3.974 Area 995565
ISTD 301.80>80.00 (-) 3.52e5



PFHxA-13C_IS
Conc 5.0000
RT 4.184 Area 5391118
ISTD 314.90>270.10 (-) 1.54e6



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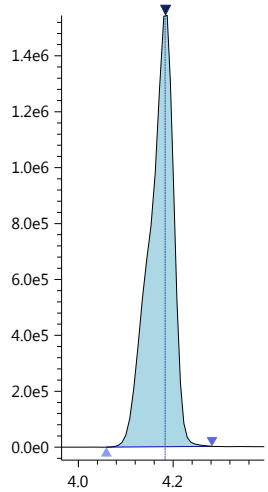
PFHxA-13C

Conc 4.8931
RT 4.184 Area 5391118

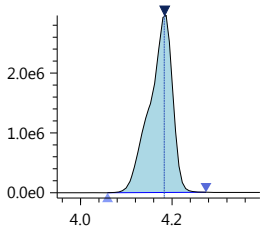
Q 314.90>270.10 (-) 1.54e6



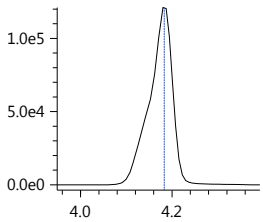
PFHxA

Conc 10.2620
RT 4.184 Area 10250071
R#1 4.14 (0.00)

Q 313.00>269.00 (-) 2.96e6



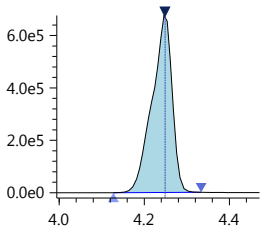
R1 313.00>119.10 (-) 1.21e5



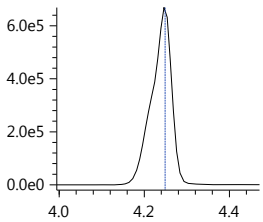
HPFO_DA

Conc 10.6787
RT 4.248 Area 2218891
R#1 99.12 (0.00)

Q 329.00>169.00 (-) 6.76e5



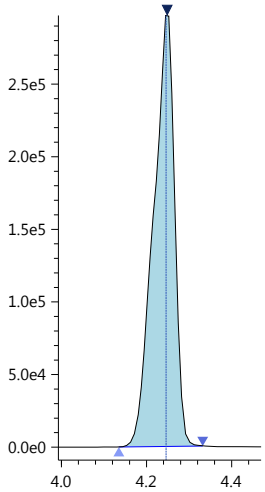
R1 329.00>285.10 (-) 6.69e5



HFPO_DA-13C_IS

Conc 5.0000
RT 4.248 Area 1024111

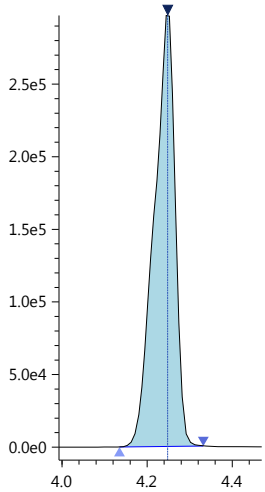
ISTD 332.00>286.80 (-) 2.97e5



HFPO_DA-13C

Conc 4.9535
RT 4.248 Area 1024111

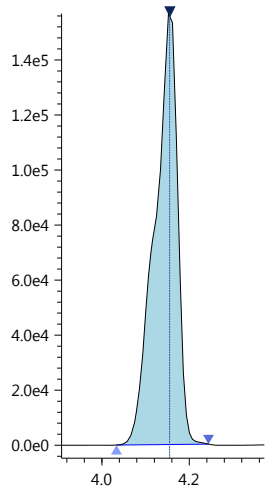
Q 332.00>286.80 (-) 2.97e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.156 Area 568895

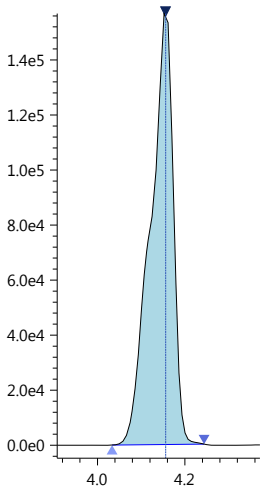
ISTD 328.80>309.05 (-) 1.57e5



4_2-FTS-13C

Conc 5.1532
RT 4.156 Area 568895

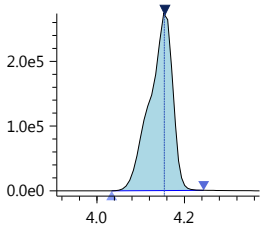
Q 328.80>309.05 (-) 1.57e5



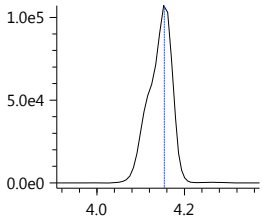
4_2-FTS_1

Conc 9.1220
RT 4.155 Area 1000974
R#1 39.12 (0.00)

Q 327.00>307.05 (-) 2.74e5



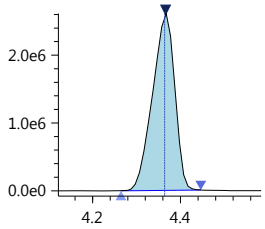
R1 327.00>81.10 (-) 1.07e5



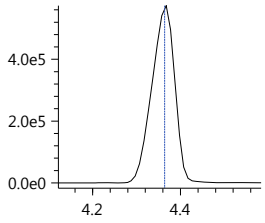
PFHpA

Conc 10.2879
RT 4.366 Area 9180484
R#1 21.97 (0.00)

Q 362.90>319.00 (-) 2.61e6



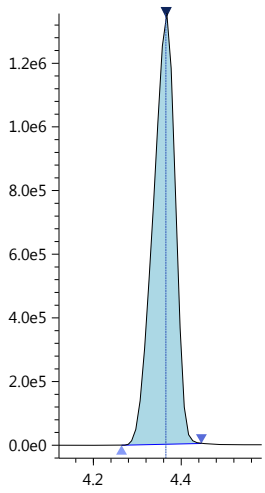
R1 362.90>169.00 (-) 5.74e5



PFHpA-13C_IS

Conc 5.0000
RT 4.366 Area 4754458

ISTD 366.90>322.10 (-) 1.36e6



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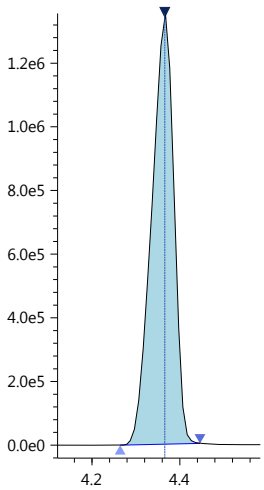
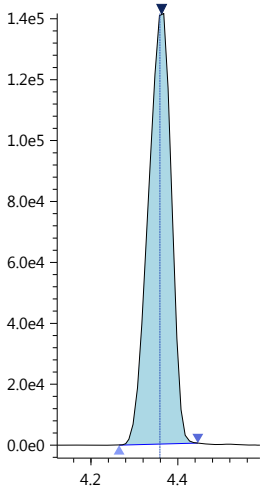
PFHpA-13C
Conc 5.2531
RT 4.366 Area 4754458

Q 366.90>322.10 (-) 1.36e6



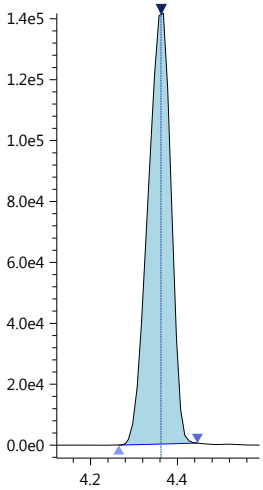
PFHxS-18O_IS
Conc 5.0000
RT 4.363 Area 526822

ISTD 402.70>84.05 (-) 1.42e5



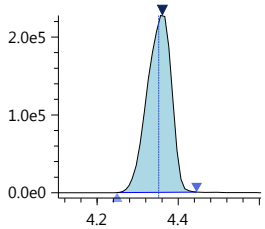
PFHxS-18O
Conc 4.8053
RT 4.363 Area 526822

Q 402.70>84.05 (-) 1.42e5

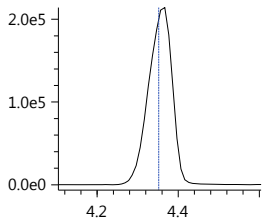


PFHxS_1
Conc 9.2191
RT 4.361 Area 965058
R#1 94.39 (0.00)

Q 399.00>80.00 (-) 2.28e5

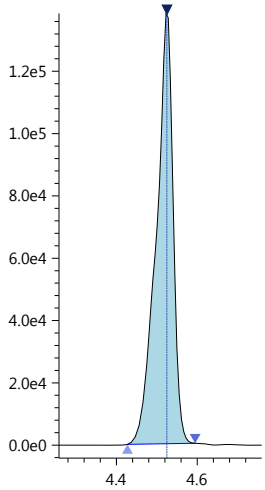


R1 399.00>99.00 (-) 2.14e5



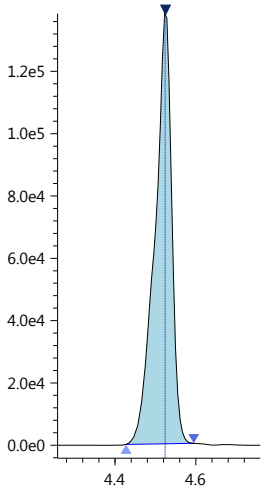
6_2-FTS-13C
Conc 5.1376
RT 4.525 Area 399003

Q 428.90>409.00 (-) 1.39e5



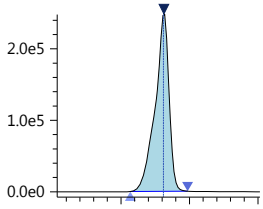
6_2-FTS-13C_IS
Conc 5.0000
RT 4.525 Area 399003

ISTD 428.90>409.00 (-) 1.39e5

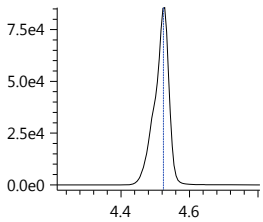


6_2-FTS_1
Conc 8.8624
RT 4.525 Area 699601
R#1 34.62 (0.00)

Q 427.00>407.00 (-) 2.48e5

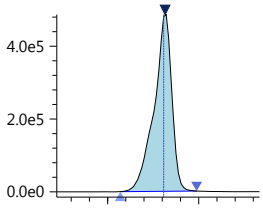


R1 427.00>80.90 (-) 8.56e4

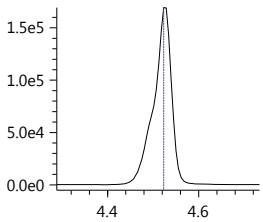


PFHpS_1
Conc 10.3914
RT 4.526 Area 1309976
R#1 35.40 (0.00)

Q 449.00>80.15 (-) 4.87e5

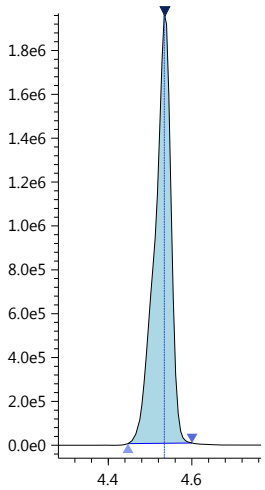


R1 449.00>99.20 (-) 1.69e5



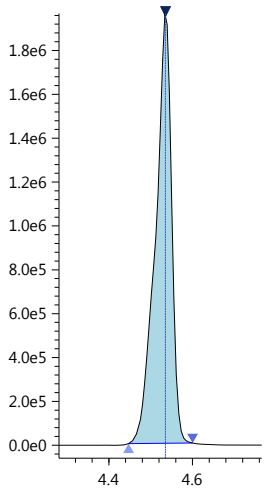
PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 5242110

ISTD 416.80>372.05 (-) 1.97e6



PFOA-13C
Conc 5.0836
RT 4.536 Area 5242110

Q 416.80>372.05 (-) 1.97e6



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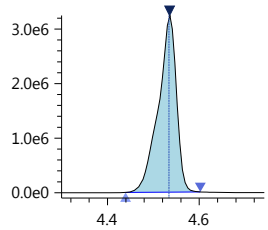
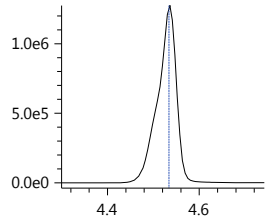
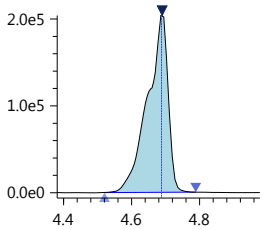
PFOA
Conc 9.9365
RT 4.536 Area 8823279
R#1 39.24 (0.00)
Q 413.00>369.00 (-) 3.25e6



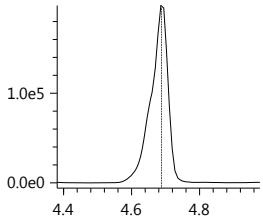
R1 413.00>169.10 (-) 1.27e6



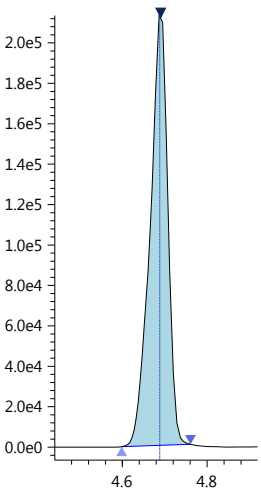
PFOS_1
Conc 9.6395
RT 4.690 Area 857440
R#1 97.06 (0.00)
Q 499.00>80.00 (-) 2.04e5



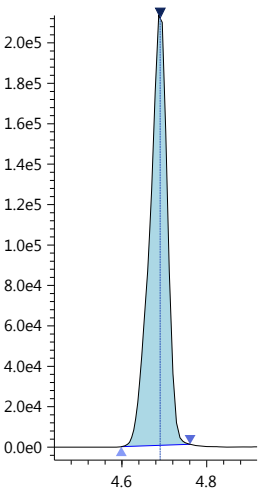
R1 499.00>99.00 (-) 1.98e5



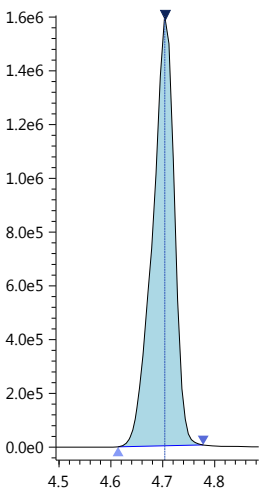
PFOS-13C_IS
Conc 5.0000
RT 4.690 Area 621274
ISTD 502.80>80.05 (-) 2.14e5



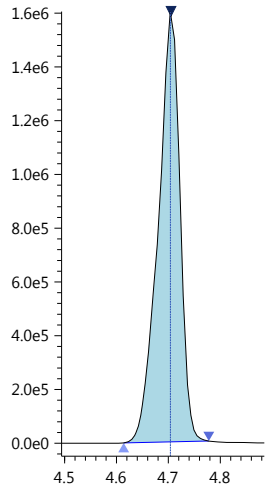
PFOS-13C
Conc 5.0261
RT 4.690 Area 621274
Q 502.80>80.05 (-) 2.14e5



PFNA-13C_IS
Conc 5.0000
RT 4.705 Area 4665008
ISTD 467.80>423.00 (-) 1.61e6



PFNA-13C
Conc 5.2452
RT 4.705 Area 4665008
Q 467.80>423.00 (-) 1.61e6



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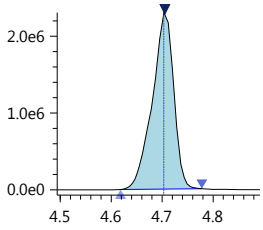
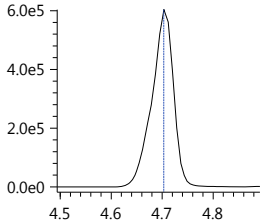
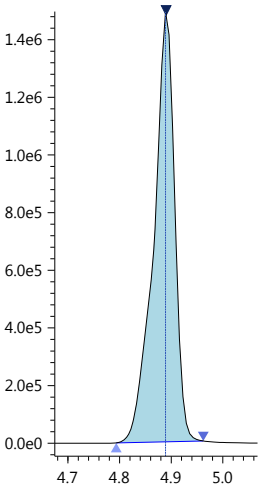
Conc 10.1454
RT 4.705 Area 6694772
R#1 26.16 (0.00)
Q 463.00>418.90 (-) 2.31e6



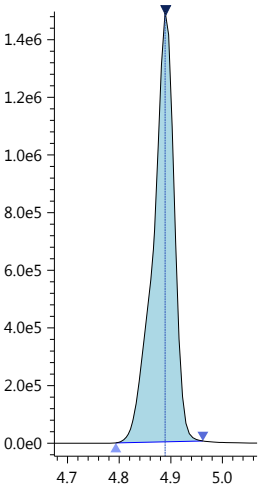
R1 463.00>219.00 (-) 6.04e5



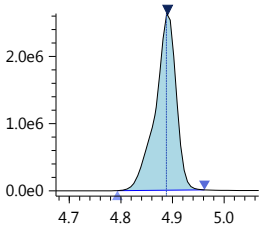
PFDA-13C_IS
Conc 5.0000
RT 4.890 Area 4205609
ISTD 514.80>469.95 (-) 1.50e6



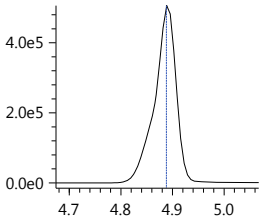
PFDA-13C
Conc 5.1037
RT 4.890 Area 4205609
Q 514.80>469.95 (-) 1.50e6



PFDA
Conc 10.3374
RT 4.891 Area 7346364
R#1 19.18 (0.00)
Q 513.00>468.80 (-) 2.64e6



R1 513.00>219.10 (-) 5.06e5



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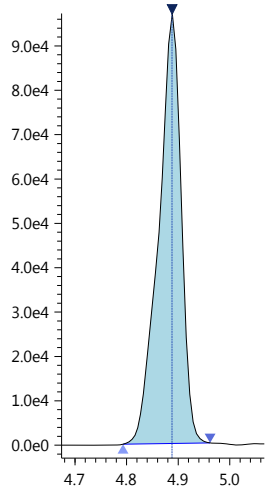
8_2-FTS-13C_IS

Conc 5.0000
RT 4.888 Area 294250

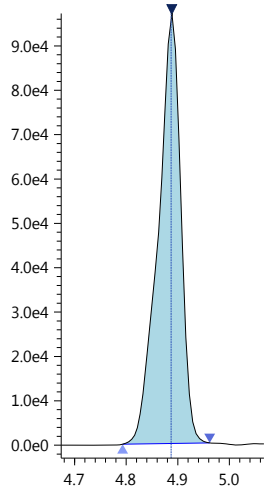
ISTD 528.80>509.00 (-) 9.73e4



8_2-FTS-13C

Conc 4.8057
RT 4.888 Area 294250

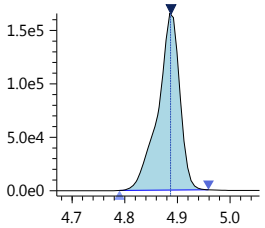
Q 528.80>509.00 (-) 9.73e4



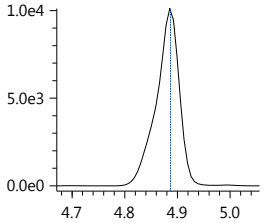
8_2-FTS_1

Conc 10.1893
RT 4.888 Area 476099
R#1 6.11 (0.00)

Q 527.10>506.90 (-) 1.66e5



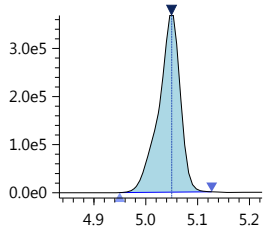
R1 527.20>487.00 (-) 1.01e4



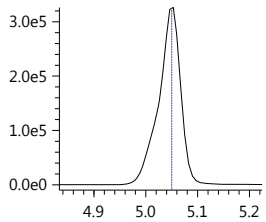
PFDS_1

Conc 10.0208
RT 5.050 Area 1074269
R#1 88.74 (0.00)

Q 599.00>79.90 (-) 3.69e5



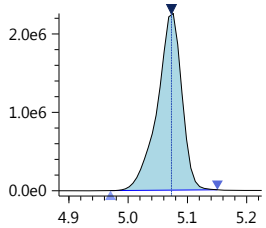
R1 599.00>99.10 (-) 3.26e5



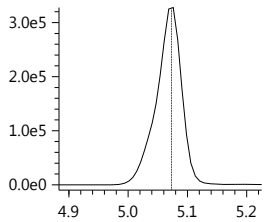
PFUnA

Conc 9.9835
RT 5.073 Area 6498572
R#1 14.69 (0.00)

Q 563.00>518.90 (-) 2.26e6



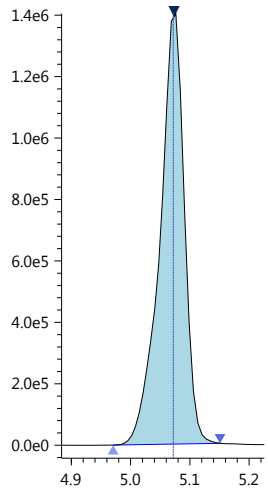
R1 563.00>219.00 (-) 3.28e5



PFUnA-13C_IS

Conc 5.0000
RT 5.073 Area 4025241

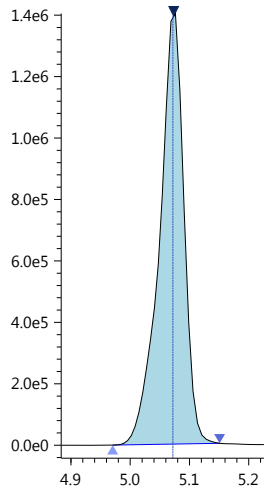
ISTD 564.80>519.95 (-) 1.41e6



PFUnA-13C

Conc 5.0223
RT 5.073 Area 4025241

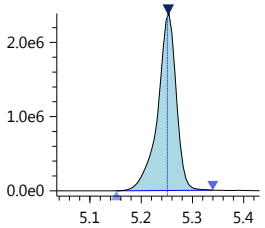
Q 564.80>519.95 (-) 1.41e6



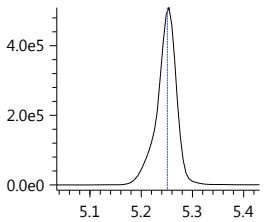
PFDoA

Conc 10.0666
RT 5.253 Area 5971808
R#1 21.18 (0.00)

Q 613.05>569.00 (-) 2.39e6



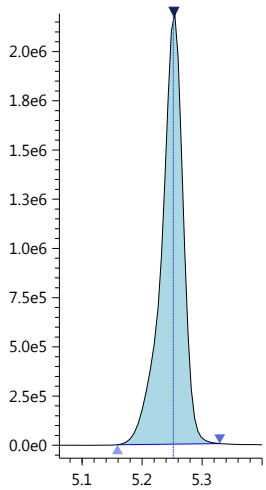
R1 613.05>169.00 (-) 5.09e5



PFDoA-13C

Conc 5.0039
RT 5.253 Area 5481919

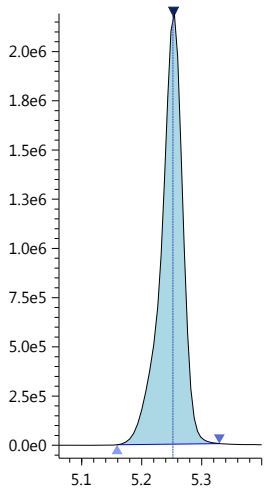
Q 614.80>569.95 (-) 2.19e6



PFDoA-13C_IS

Conc 5.0000
RT 5.253 Area 5481919

ISTD 614.80>569.95 (-) 2.19e6



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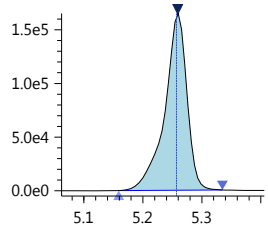
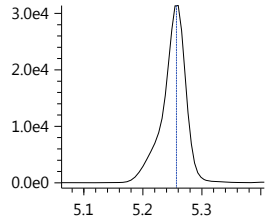
10_2-FtS_1

Conc 9.9695
RT 5.259 Area 428813
R#1 19.04 (0.00)

Q 627.00>606.95 (-) 1.65e5



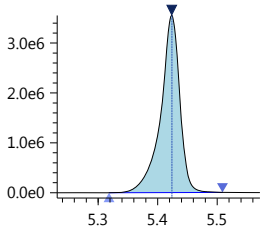
R1 627.00>81.25 (-) 3.14e4



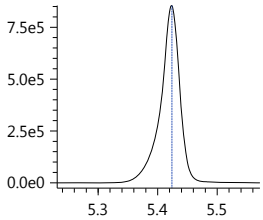
PFTrDA

Conc 10.2587
RT 5.424 Area 7901945
R#1 24.27 (0.00)

Q 663.00>618.90 (-) 3.55e6



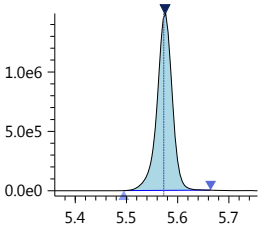
R1 662.90>169.00 (-) 8.55e5



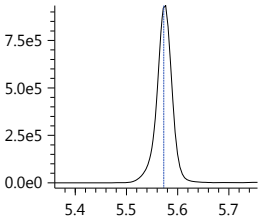
PFTeDA

Conc 10.0927
RT 5.575 Area 3071268
R#1 63.87 (0.00)

Q 713.40>669.00 (-) 1.49e6



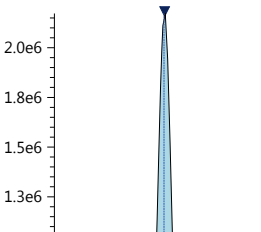
R1 713.40>169.10 (-) 9.34e5



PFTeDA-13C

Conc 5.1391
RT 5.575 Area 4434745

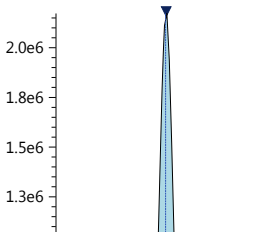
Q 714.70>669.90 (-) 2.17e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.575 Area 4434745

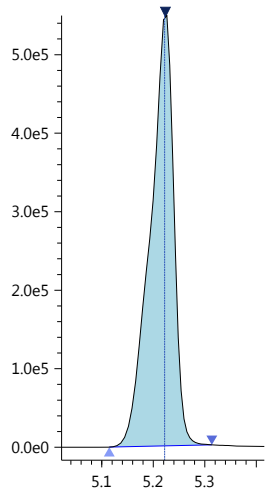
ISTD 714.70>669.90 (-) 2.17e6



FOSA-13C_IS

Conc 5.0000
RT 5.224 Area 1741238

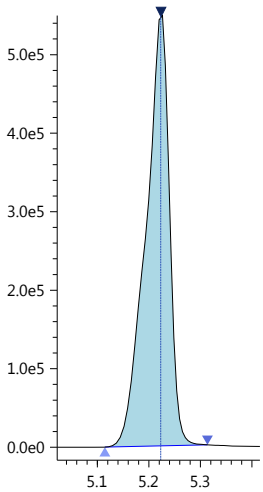
ISTD 506.00>78.05 (-) 5.50e5



FOSA-13C

Conc 5.0782
RT 5.224 Area 1741238

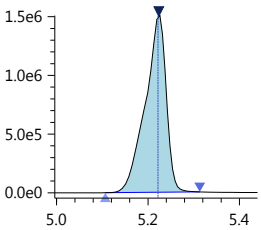
Q 506.00>78.05 (-) 5.50e5



FOSA

Conc 10.2570
RT 5.224 Area 4782677
R#1 4.42 (0.00)

Q 498.20>78.00 (-) 1.51e6



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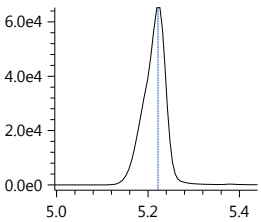
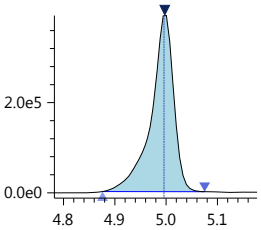


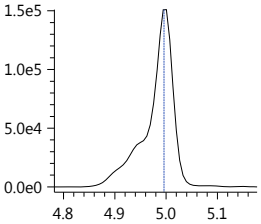
N-MeFOSAA

Conc 9.7120
RT 4.998 Area 1192464
R#1 38.41 (0.00)

Q 570.20>419.00 (-) 3.93e5



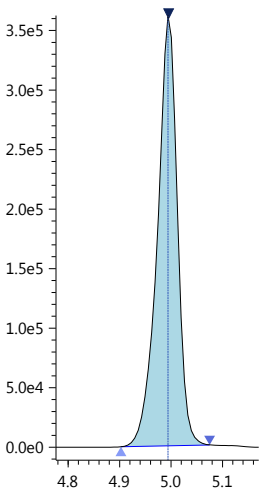
R1 570.20>512.00 (-) 1.51e5



N-MeFOSAA-d3

Conc 5.3387
RT 4.995 Area 975290

Q 572.80>419.05 (-) 3.63e5



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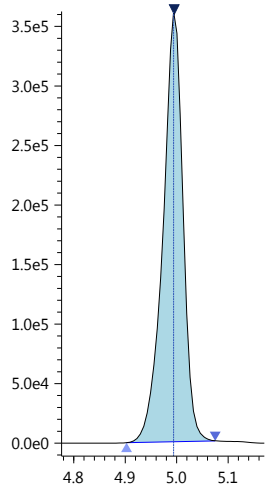
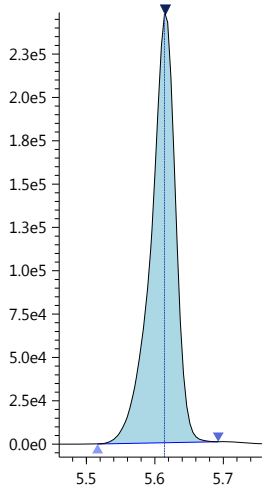
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.995 Area 975290

ISTD 572.80>419.05 (-) 3.63e5



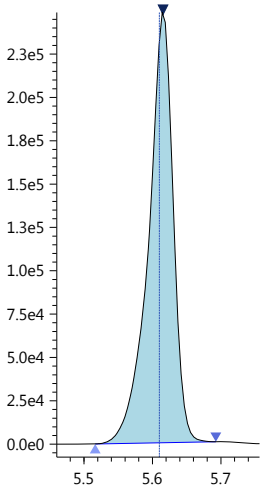
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.615 Area 621897

ISTD 514.90>168.90 (-) 2.49e5



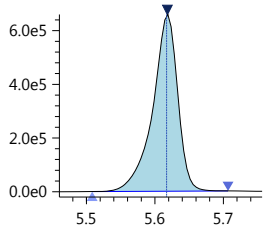
N-MeFOSA-d3
Conc 5.1380
RT 5.615 Area 621897

Q 514.90>168.90 (-) 2.49e5

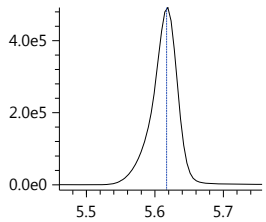


N-MeFOSA
Conc 10.5023
RT 5.618 Area 1669732
R#1 74.53 (0.00)

Q 512.00>169.10 (-) 6.60e5

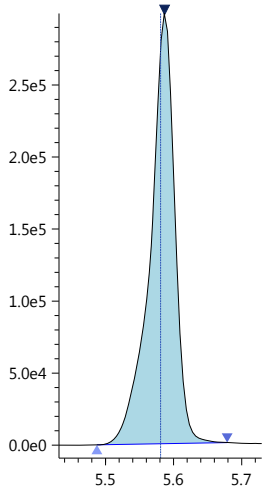


R1 512.00>219.00 (-) 4.92e5



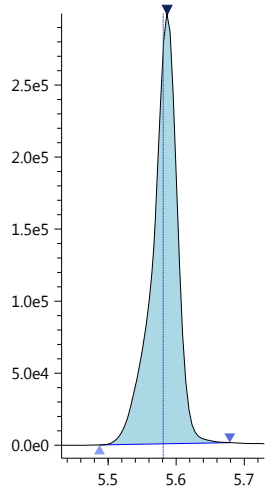
N-MeFOSE-d7
Conc 5.1003
RT 5.587 Area 746907

Q 622.70>59.10 (-) 3.00e5



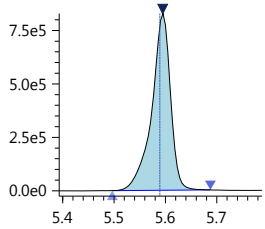
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.587 Area 746907

ISTD 622.70>59.10 (-) 3.00e5

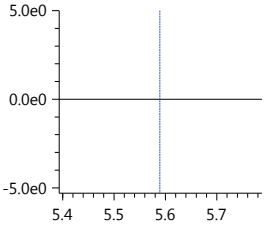


N-MeFOSE
Conc 10.1365
RT 5.595 Area 2083466
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 8.29e5

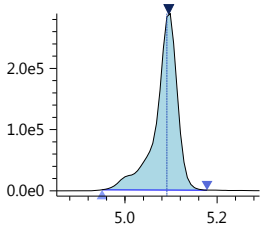


R1 556.00>121.20 (-) 0.00e0

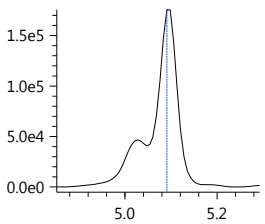


N-EtFOSAA
Conc 9.9148
RT 5.095 Area 925851
R#1 61.05 (0.00)

Q 584.20>418.95 (-) 2.90e5

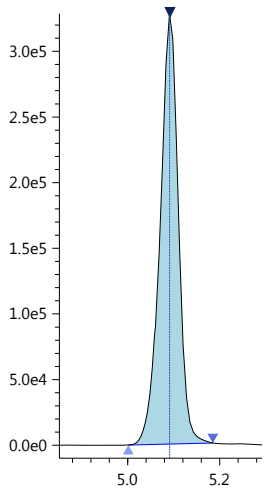


R1 584.20>526.10 (-) 1.76e5



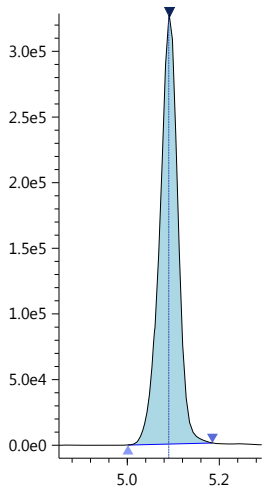
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 905589

ISTD 588.80>419.00 (-) 3.29e5



N-EtFOSAA-d5
Conc 5.1643
RT 5.092 Area 905589

Q 588.80>419.00 (-) 3.29e5



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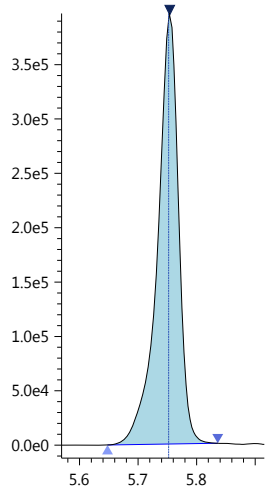
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.754 Area 988282

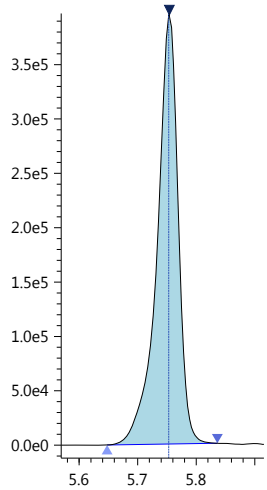
ISTD 530.90>169.15 (-) 3.97e5



N-EtFOSA-d9

Conc 5.2292
RT 5.754 Area 988282

Q 530.90>169.15 (-) 3.97e5



N-EtFOSA

Conc 10.5261
RT 5.760 Area 332514
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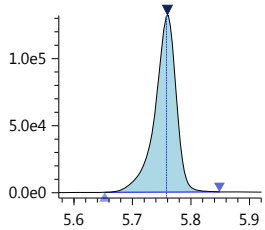
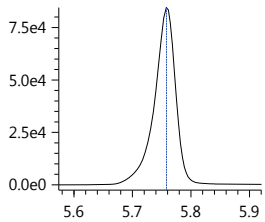
Q 526.90>169.10 (-) 1.32e5



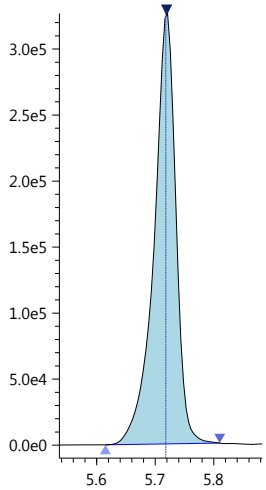
R1 526.90>219.00 (-) 8.45e4



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.719 Area 847694

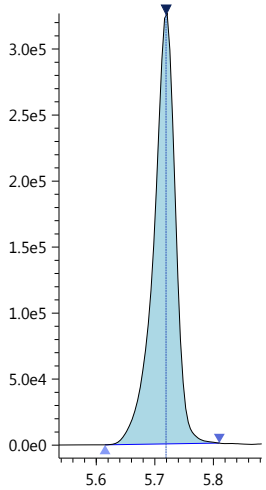
ISTD 638.70>59.10 (-) 3.27e5



N-EtFOSE-d9

Conc 5.2511
RT 5.719 Area 847694

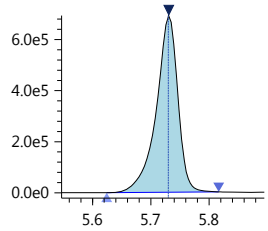
Q 638.70>59.10 (-) 3.27e5



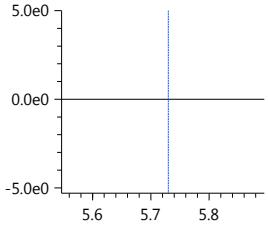
N-EtFOSE

Conc 10.1939
RT 5.731 Area 1775914
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 6.94e5



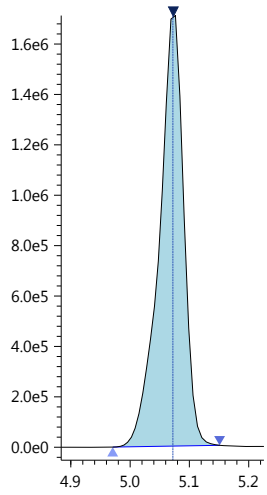
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.073 Area 4927105

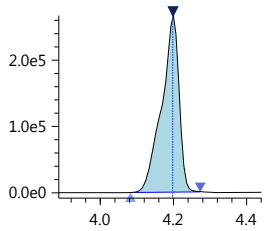
ISTD 570.00>525.00 (-) 1.71e6



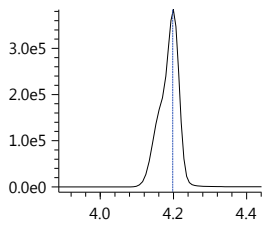
PFPeS

Conc 9.4303
RT 4.199 Area 877139
R#1 142.88 (0.00)

Q 349.00>99.00 (-) 2.67e5



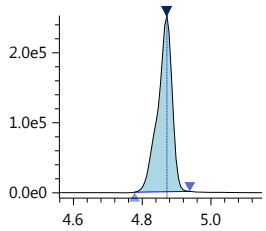
R1 349.00>79.95 (-) 3.84e5



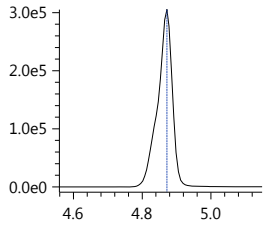
PFNS

Conc 9.8026
RT 4.871 Area 725950
R#1 120.67 (0.00)

Q 549.00>99.00 (-) 2.53e5



R1 549.00>79.95 (-) 3.05e5



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Printed at 1/21/2019 9:31:25 AM

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Acquired by: System Administrator
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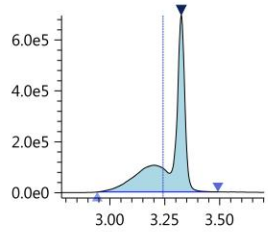
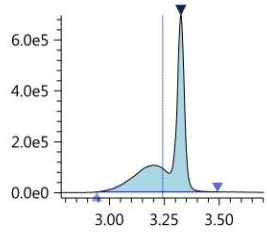
PFBA-13C_IS
Conc 5.0000
RT 3.325 Area 2787154
ISTD 216.90>172.15 (-) 6.96e5



PFBA-13C
Conc 5.2406
RT 3.325 Area 2787154
Q 216.90>172.15 (-) 6.96e5



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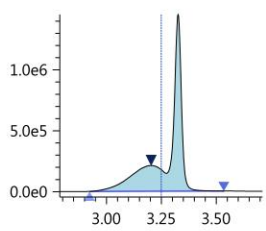
Conc 2.1000
RT 3.203 Area 5609294
Q 213.00>169.10 (-) 1.45e6



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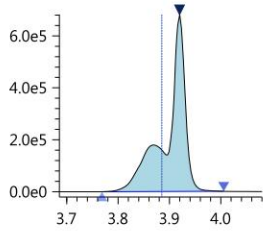
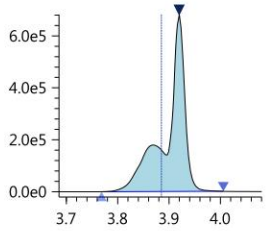
RT 3.919 Area 1679950
ISTD 267.90>223.00 (-) 6.82e5



PFPeA-13C
Conc 5.1879
RT 3.919 Area 1679950
Q 267.90>223.00 (-) 6.82e5



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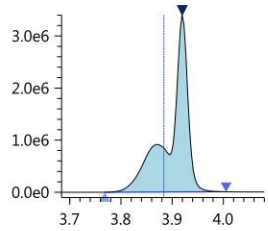
RT 3.920 Area 8484652
Q 263.05>219.10 (-) 3.40e6



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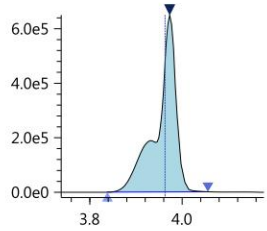
Conc 1.9987
RT 3.973 Area 1830521
Q 299.00>80.00 (-) 6.50e5



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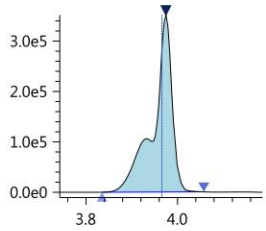
Conc 5.1404
RT 3.974 Area 995565
Q 301.80>80.00 (-) 3.52e5



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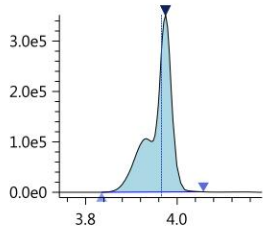

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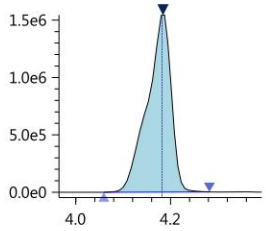
RT 4.184 Area 5391118
ISTD 314.90>270.10 (-) 1.54e6



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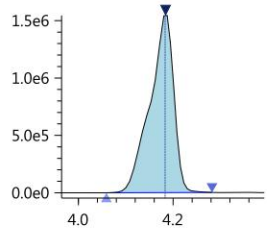
RT 4.184 Area 5391118
Q 314.90>270.10 (-) 1.54e6



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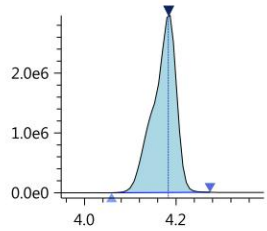
RT 4.184 Area 10250071
Q 313.00>269.00 (-) 2.96e6



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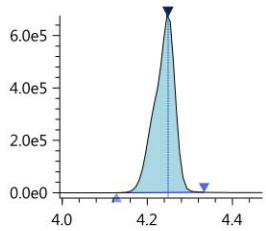
Q 329.00>169.00 (-) 6.76e5



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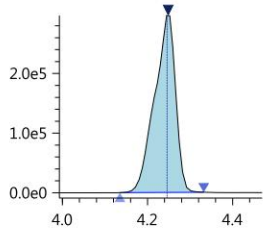
RT 4.248 Area 1024111
ISTD 332.00>286.80 (-) 2.97e5



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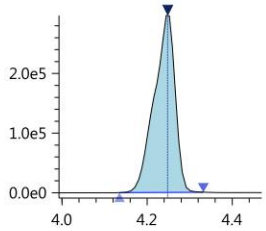
Q 332.00>286.80 (-) 2.97e5



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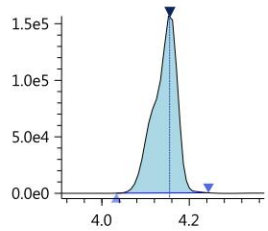
Conc 5.0000
RT 4.156 Area 568895
ISTD 328.80>309.05 (-) 1.57e5



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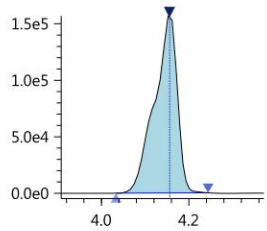
Q 328.80>309.05 (-) 1.57e5



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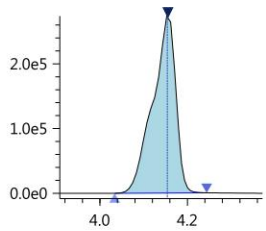
RT 4.155 Area 1000974
Q 327.00>307.05 (-) 2.74e5



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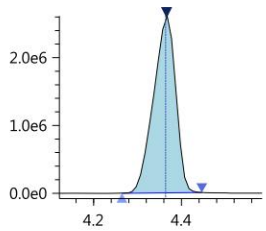
Q 362.90>319.00 (-) 2.61e6



PFHpA-13C_IS
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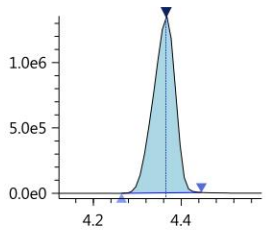
RT 4.366 Area 4754458
ISTD 366.90>322.10 (-) 1.36e6



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PFHpA-13C
Conc 5.2531
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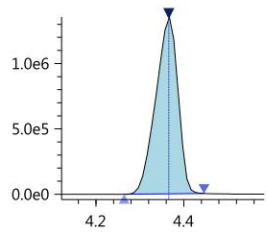
Q 366.90>322.10 (-) 1.36e6



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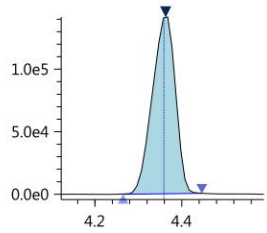

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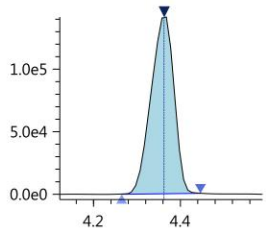

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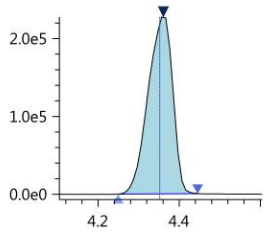

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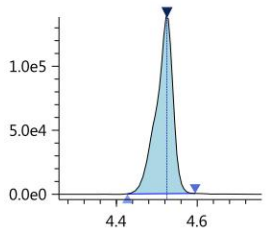
Q 428.90>409.00 (-) 1.39e5



6_2-FTS-13C_IS
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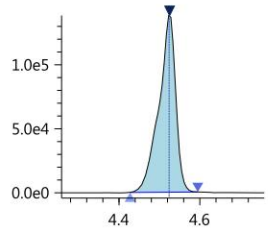
ISTD 428.90>409.00 (-) 1.39e5



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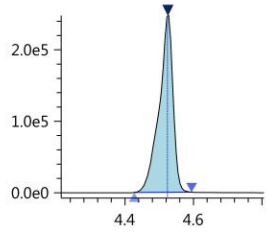
RT 4.525 Area 699601
Q 427.00>407.00 (-) 2.48e5



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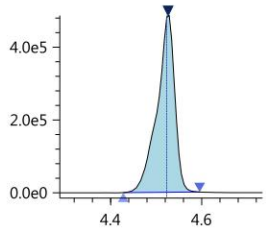
Conc 2.2132
RT 4.526 Area 1309976
Q 449.00>80.15 (-) 4.87e5



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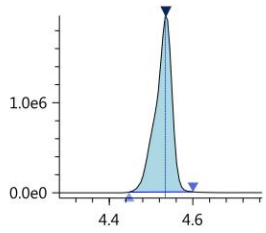
Conc 5.0000
RT 4.536 Area 5242110
ISTD 416.80>372.05 (-) 1.97e6



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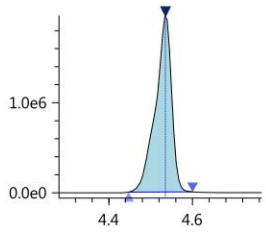

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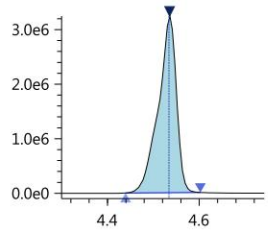

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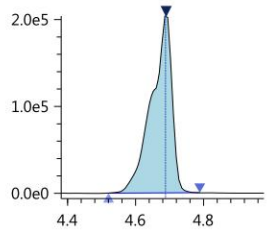
Conc 2.0969
RT 4.690 Area 857440
Q 499.00>80.00 (-) 2.04e5



PFOS-13C_IS
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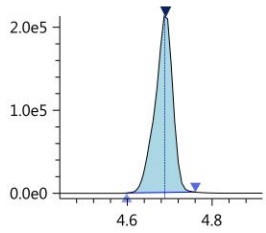
RT 4.690 Area 621274
ISTD 502.80>80.05 (-) 2.14e5



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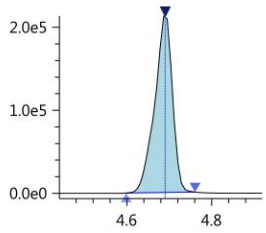
RT 4.690 Area 621274
Q 502.80>80.05 (-) 2.14e5



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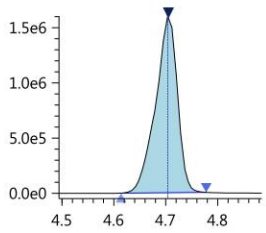
ISTD 467.80>423.00 (-) 1.61e6



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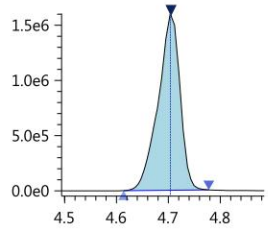
Conc 5.2452
RT 4.705 Area 4665008
Q 467.80>423.00 (-) 1.61e6



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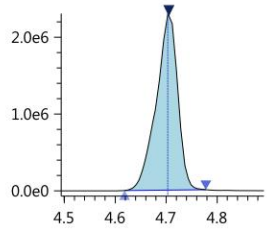
Conc 2.1942
RT 4.705 Area 6694772
Q 463.00>418.90 (-) 2.31e6



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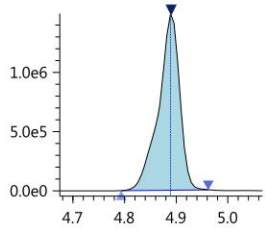

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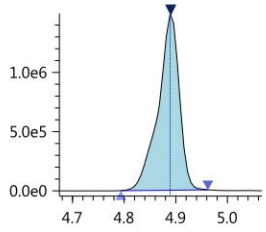
Q 514.80>469.95 (-) 1.50e6



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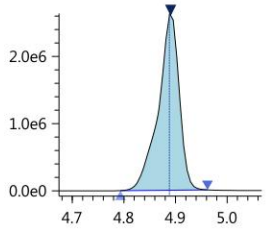
Q 513.00>468.80 (-) 2.64e6



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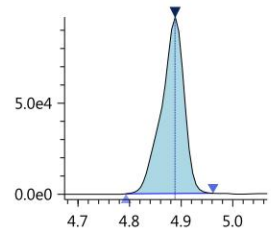
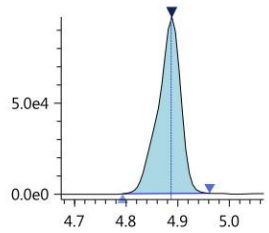
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 294250
ISTD 528.80>509.00 (-) 9.73e4



8_2-FTS-13C
Conc 4.8057
RT 4.888 Area 294250
Q 528.80>509.00 (-) 9.73e4



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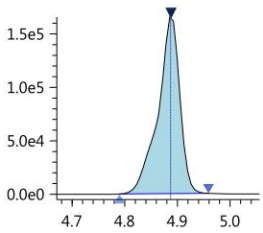
Conc 2.3096
RT 4.888 Area 476099
Q 527.10>506.90 (-) 1.66e5



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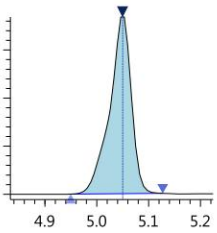
RT 5.050 Area 1074269
Q 599.00>79.90 (-) 3.69e5



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RT 5.073 Area 6498572
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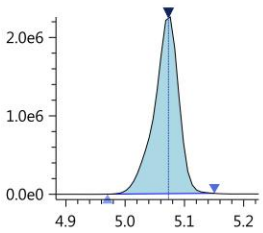

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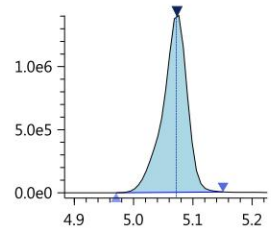
ISTD 564.80>519.95 (-) 1.41e6



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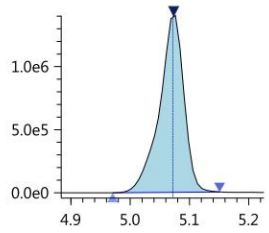
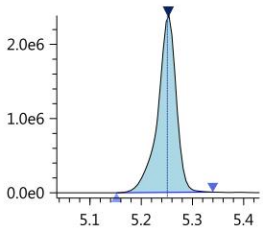
Q 564.80>519.95 (-) 1.41e6



PFDoA
Conc 2.2139
RT 5.253 Area 5971808
Q 613.05>569.00 (-) 2.39e6



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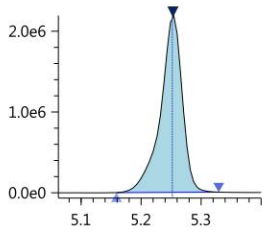
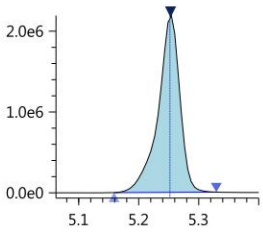
RT 5.253 Area 5481919
Q 614.80>569.95 (-) 2.19e6



PFDoA-13C_IS
Conc 5.0000
RT 5.253 Area 5481919
ISTD 614.80>569.95 (-) 2.19e6



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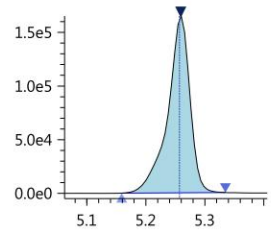
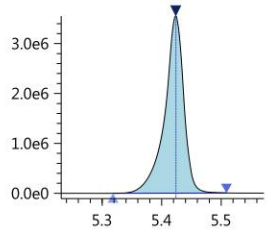
Conc 2.2844
RT 5.259 Area 428813
Q 627.00>606.95 (-) 1.65e5



PFTrDA
Conc 2.2584
RT 5.424 Area 7901945
Q 663.00>618.90 (-) 3.55e6



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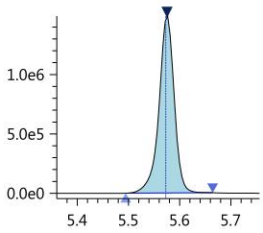
Conc 2.2070
RT 5.575 Area 3071268
Q 713.40>669.00 (-) 1.49e6



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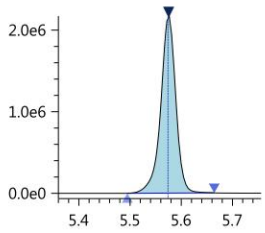
Conc 5.1391
RT 5.575 Area 4434745
Q 714.70>669.90 (-) 2.17e6



PFTeDA-13C_IS
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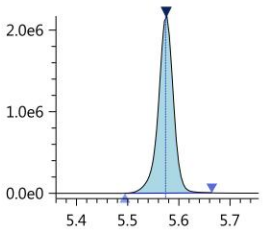
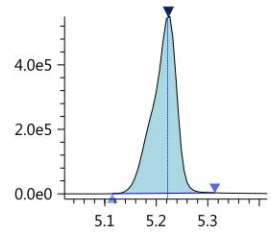
RT 5.575 Area 4434745
ISTD 714.70>669.90 (-) 2.17e6



FOSA-13C_IS
Conc 5.0000
RT 5.224 Area 1741238
ISTD 506.00>78.05 (-) 5.50e5



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RT 5.224 Area 1741238
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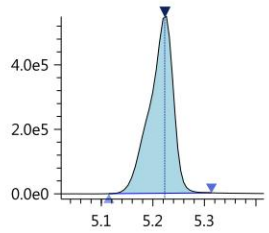
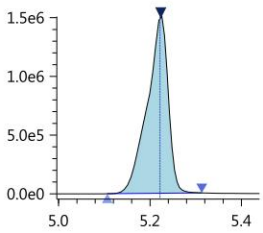


FOSA
Conc 2.2528
RT 5.224 Area 4782677
Q 498.20>78.00 (-) 1.51e6



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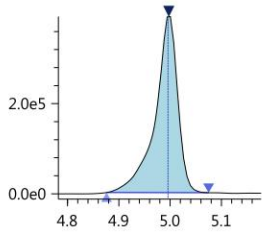
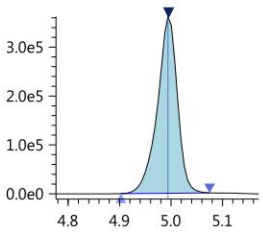
Conc 2.2231
RT 4.998 Area 1192464
Q 570.20>419.00 (-) 3.93e5



N-MeFOSAA-d3
Conc 5.3387
RT 4.995 Area 975290
Q 572.80>419.05 (-) 3.63e5



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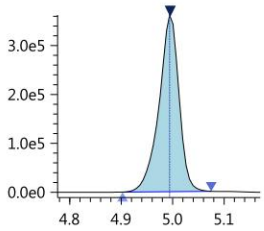
Printed at 1/21/2019 9:31:25 AM

N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.995 Area 975290
ISTD 572.80>419.05 (-) 3.63e5



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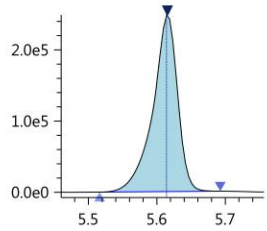
ISTD 514.90>168.90 (-) 2.49e5



N-MeFOSA-d3
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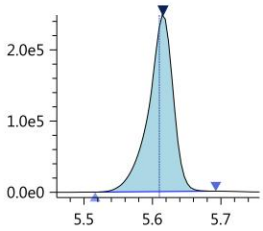
Q 514.90>168.90 (-) 2.49e5



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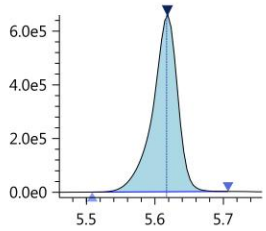
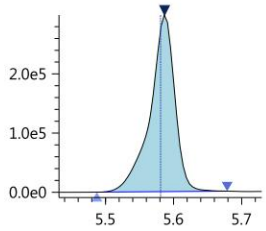


N-MeFOSE-d7
Conc 5.1003
RT 5.587 Area 746907
Q 622.70>59.10 (-) 3.00e5



N-MeFOSE-d7_IS
Conc 5.0000
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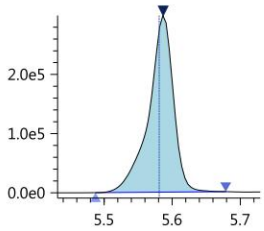
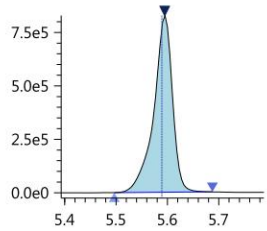


N-MeFOSE
Conc 2.1941
RT 5.595 Area 2083466
Q 616.00>59.00 (-) 8.29e5



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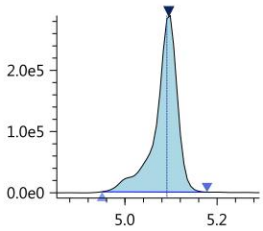
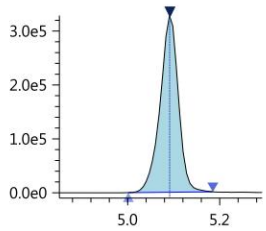
Conc 2.2015
RT 5.095 Area 925851
Q 584.20>418.95 (-) 2.90e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 905589
ISTD 588.80>419.00 (-) 3.29e5



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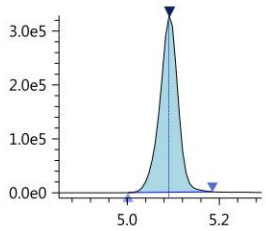

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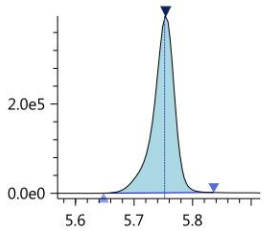

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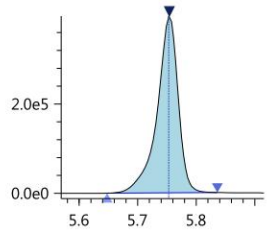

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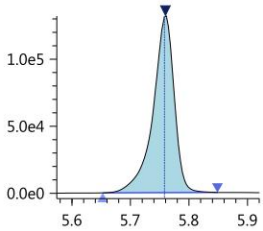
Conc 2.2514
RT 5.760 Area 332514
Q 526.90>169.10 (-) 1.32e5



N-EtFOSE-d9_IS
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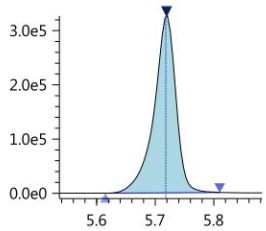
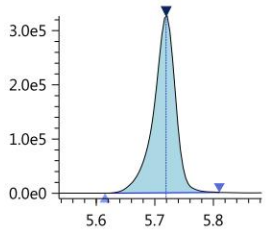
RT 5.719 Area 847694
ISTD 638.70>59.10 (-) 3.27e5



N-EtFOSE-d9
Conc 5.2511
RT 5.719 Area 847694
Q 638.70>59.10 (-) 3.27e5



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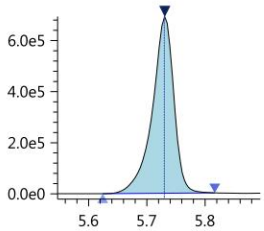
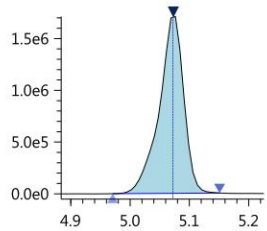
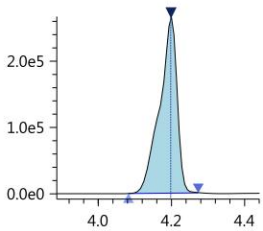
RT 5.731 Area 1775914
Q 630.00>58.90 (-) 6.94e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.073 Area 4927105
ISTD 570.00>525.00 (-) 1.71e6



PFPeS
Conc 2.1553
RT 4.199 Area 877139
Q 349.00>99.00 (-) 2.67e5



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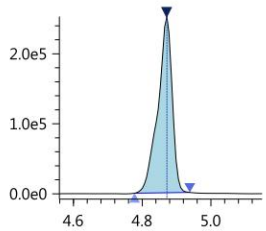
Conc 2.1822
RT 4.871 Area 725950
Q 549.00>99.00 (-) 2.53e5



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_029

Sample ID: 15.0 PPB ICAL
Date acquired: 1/18/2019 6:49:52 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_029.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.323	2770370	2770370	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.323	2770370	4746887	26	5.4068	ng/mL	5.0000
PFBA	Auto	3.205	8236041	2770370	2	14.9482	ng/mL	15.0000
PFPeA-13C_IS	Auto	3.920	1609420	1609420	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.920	1609420	4746887	26	5.1588	ng/mL	5.0000
PFPeA	Auto	3.920	12171232	1609420	4	15.0532	ng/mL	15.0000
PFBS_1	Auto	3.973	2643048	984694	16	13.3412	ng/mL	13.3106
PFBS-13C	Auto	3.975	984694	4746887	26	5.2773	ng/mL	5.0000
PFBS-13C_IS	Auto	3.975	984694	984694	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.184	5348396	5348396	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.184	5348396	4746887	26	5.0387	ng/mL	5.0000
PFHxA	Auto	4.184	14728500	5348396	6	14.8626	ng/mL	15.0000
HPFO_DA	Auto	4.248	3232814	1017970	3	15.6522	ng/mL	15.0000
HFPO_DA-13C_IS	Auto	4.248	1017970	1017970	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.248	1017970	4746887	26	5.1108	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.156	552080	552080	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.156	552080	4746887	26	5.1907	ng/mL	5.0000
4_2-FTS_1	Auto	4.156	1396235	552080	5	13.1116	ng/mL	14.0583
PFHpA	Auto	4.366	12937114	4560381	8	15.1105	ng/mL	15.0000
PFHpA-13C_IS	Auto	4.365	4560381	4560381	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.365	4560381	4746887	26	5.2300	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.362	525088	525088	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.362	525088	4746887	26	4.9713	ng/mL	5.0000
PFHxS_1	Auto	4.358	1412469	525088	7	13.5378	ng/mL	13.6961
6_2-FTS-13C	Auto	4.525	388770	4746887	26	5.1958	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.525	388770	388770	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.525	988715	388770	10	12.8546	ng/mL	14.2676
PFHpS_1	Auto	4.526	1858780	525088	7	14.7935	ng/mL	14.3016
PFOA-13C_IS	Auto	4.536	5039759	5039759	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.536	5039759	4746887	26	5.0729	ng/mL	5.0000
PFOA	Auto	4.536	12810853	5039759	9	15.0086	ng/mL	15.0000
PFOS_1	Auto	4.690	1244981	615562	13	14.1262	ng/mL	13.9384
PFOS-13C_IS	Auto	4.691	615562	615562	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.691	615562	4746887	26	5.1690	ng/mL	5.0000
PFNA-13C_IS	Auto	4.705	4420742	4420742	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.705	4420742	4746887	26	5.1593	ng/mL	5.0000
PFNA	Auto	4.706	9759028	4420742	11	15.6034	ng/mL	15.0000
PFDA-13C_IS	Auto	4.891	4051957	4051957	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.891	4051957	4746887	26	5.1039	ng/mL	5.0000
PFDA	Auto	4.891	10337465	4051957	12	15.0979	ng/mL	15.0000
8_2-FTS-13C_IS	Auto	4.888	312417	312417	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.888	312417	4746887	26	5.2961	ng/mL	5.0000
8_2-FTS_1	Auto	4.888	638580	312417	15	12.8720	ng/mL	14.4007
PFDS_1	Auto	5.049	1590254	615562	13	14.9716	ng/mL	14.4700
PFUnA	Auto	5.073	9355607	3831732	14	15.1013	ng/mL	15.0000
PFUnA-13C_IS	Auto	5.073	3831732	3831732	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.073	3831732	4746887	26	4.9623	ng/mL	5.0000
PFDoA	Auto	5.253	8708712	5308475	17	15.1584	ng/mL	15.0000
PFDoA-13C	Auto	5.252	5308475	4746887	26	5.0296	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.252	5308475	5308475	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.259	597189	312417	15	13.0768	ng/mL	14.4929
PFTrDA	Auto	5.424	11125488	4273086	22	14.9886	ng/mL	15.0000
PFTeDA	Auto	5.575	4357510	4273086	22	14.9059	ng/mL	15.0000
PFTeDA-13C	Auto	5.575	4273086	4746887	26	5.1398	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.575	4273086	4273086	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.223	1722393	1722393	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.223	1722393	4746887	26	5.2140	ng/mL	5.0000
FOSA	Auto	5.223	6901113	1722393	18	14.9621	ng/mL	15.0000
N-MeFOSAA	Auto	4.996	1694246	925646	19	14.5388	ng/mL	15.0000
N-MeFOSAA-d3	Auto	4.995	925646	4746887	26	5.2593	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.995	925646	925646	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.615	644797	644797	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.615	644797	4746887	26	5.5295	ng/mL	5.0000
N-MeFOSA	Auto	5.618	2395912	644797	1	14.5346	ng/mL	15.0000
N-MeFOSE-d7	Auto	5.587	704512	4746887	26	4.9935	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.587	704512	704512	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.595	3006303	704512	20	15.5064	ng/mL	15.0000

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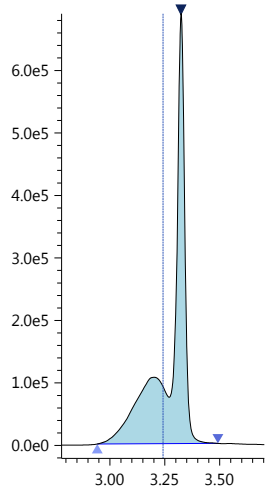
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.095	1385571	878388	21	15.2903	ng/mL	15.0000
N-EtFOSAA-d5_IS	Auto	5.091	878388	878388	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.091	878388	4746887	26	5.1994	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.753	972037	972037	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.753	972037	4746887	26	5.3385	ng/mL	5.0000
N-EtFOSA	Auto	5.759	480064	972037	23	15.4509	ng/mL	15.0000
N-EtFOSE-d9_IS	Auto	5.718	773412	773412	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.718	773412	4746887	26	4.9728	ng/mL	5.0000
N-EtFOSE	Auto	5.731	2451685	773412	24	15.4246	ng/mL	15.0000
13C7-PFUnDA_IS	Auto	5.073	4746887	4746887	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.199	1236059	984694	16	13.4358	ng/mL	14.1138
PFNS	Auto	4.871	1037948	615562	13	14.1455	ng/mL	14.4237

PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2770370
ISTD 216.90>172.15 (-) 6.91e5



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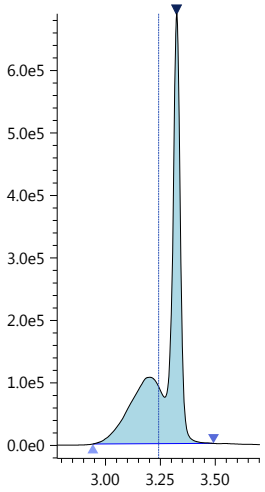
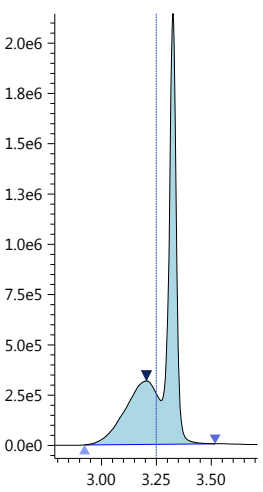
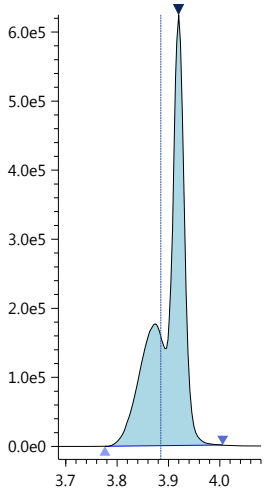
Conc 5.4068
RT 3.323 Area 2770370
Q 216.90>172.15 (-) 6.91e5



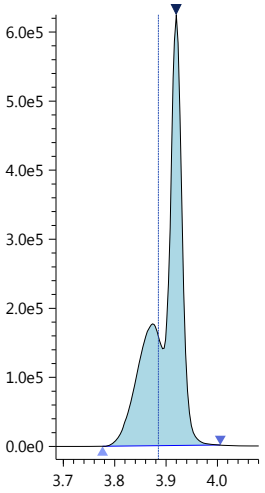
PFBA
Conc 14.9482
RT 3.205 Area 8236041
Q 213.00>169.10 (-) 2.15e6



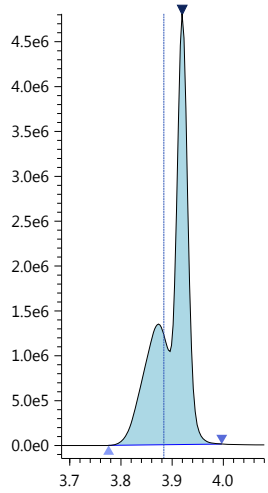
PFPeA-13C_IS
Conc 5.0000
RT 3.920 Area 1609420
ISTD 267.90>223.00 (-) 6.25e5



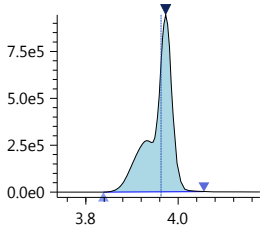
PFPeA-13C
Conc 5.1588
RT 3.920 Area 1609420
Q 267.90>223.00 (-) 6.25e5



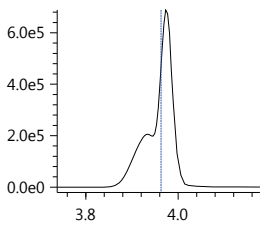
PFPeA
Conc 15.0532
RT 3.920 Area 12171232
Q 263.05>219.10 (-) 4.81e6



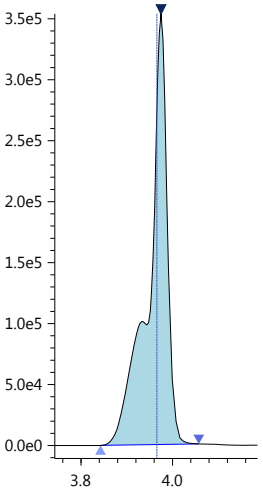
PFBS_1
Conc 13.3412
RT 3.973 Area 2643048
R#1 72.70 (0.00)
Q 299.00>80.00 (-) 9.45e5



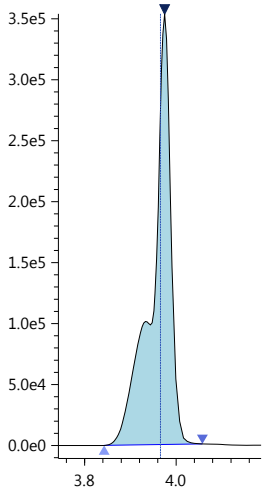
R1 298.80>99.00 (-) 6.89e5



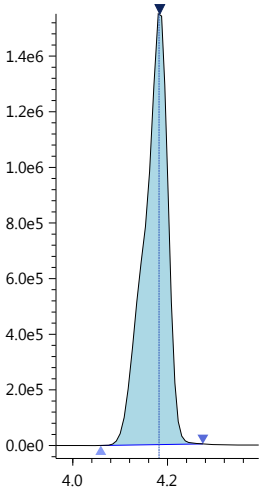
PFBS-13C
Conc 5.2773
RT 3.975 Area 984694
Q 301.80>80.00 (-) 3.54e5



PFBS-13C_IS
Conc 5.0000
RT 3.975 Area 984694
ISTD 301.80>80.00 (-) 3.54e5



PFHxA-13C_IS
Conc 5.0000
RT 4.184 Area 5348396
ISTD 314.90>270.10 (-) 1.55e6



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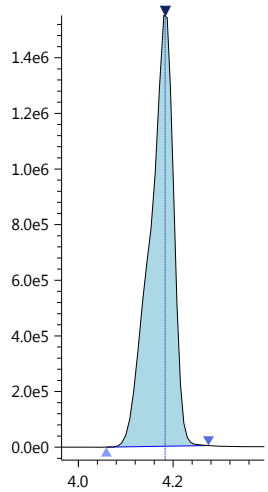
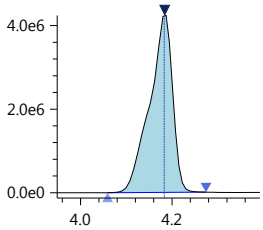
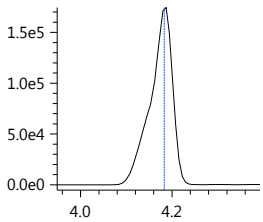
PFHxA-13C
Conc 5.0387
RT 4.184 Area 5348396
Q 314.90>270.10 (-) 1.55e6



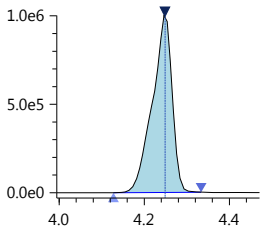
PFHxA
Conc 14.8626
RT 4.184 Area 14728500
R#1 4.06 (0.00)
Q 313.00>269.00 (-) 4.24e6



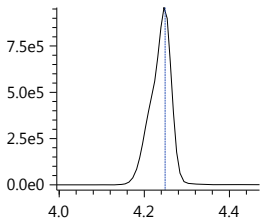
R1 313.00>119.10 (-) 1.74e5



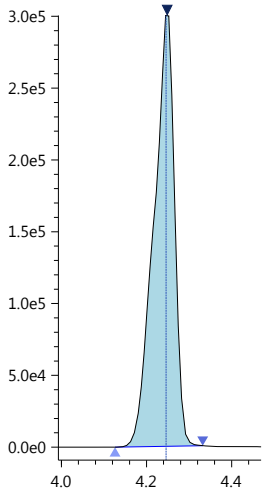
HPFO_DA
Conc 15.6522
RT 4.248 Area 3232814
R#1 95.74 (0.00)
Q 329.00>169.00 (-) 1.00e6



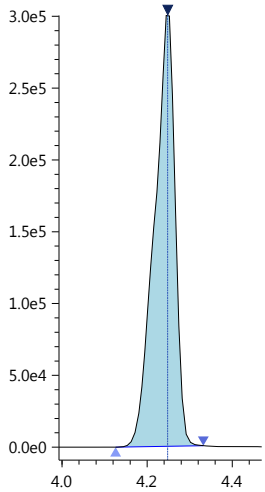
R1 329.00>285.10 (-) 9.58e5



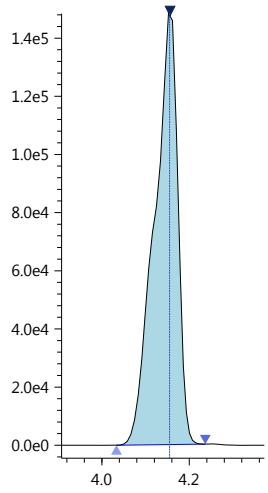
HFPO_DA-13C_IS
Conc 5.0000
RT 4.248 Area 1017970
ISTD 332.00>286.80 (-) 3.01e5



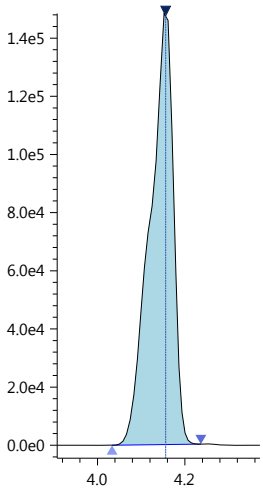
HFPO_DA-13C
Conc 5.1108
RT 4.248 Area 1017970
Q 332.00>286.80 (-) 3.01e5



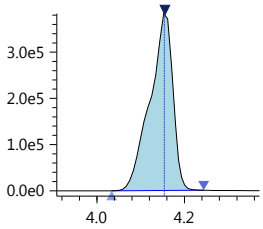
4_2-FTS-13C_IS
Conc 5.0000
RT 4.156 Area 552080
ISTD 328.80>309.05 (-) 1.48e5



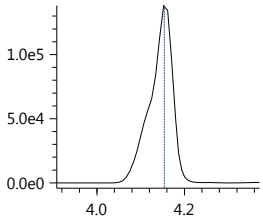
4_2-FTS-13C
Conc 5.1907
RT 4.156 Area 552080
Q 328.80>309.05 (-) 1.48e5



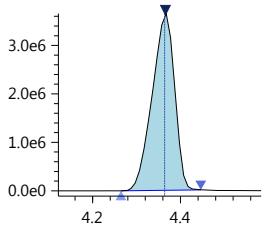
4_2-FTS_1
Conc 13.1116
RT 4.156 Area 1396235
R#1 35.98 (0.00)
Q 327.00>307.05 (-) 3.84e5



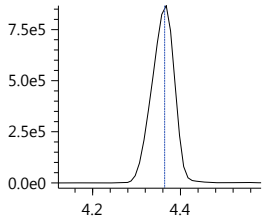
R1 327.00>81.10 (-) 1.38e5



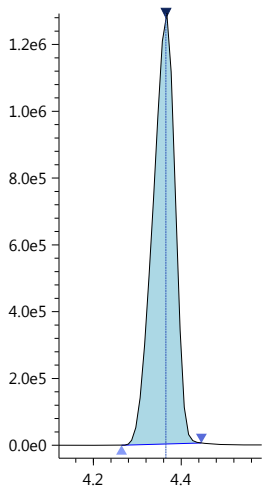
PFHpA
Conc 15.1105
RT 4.366 Area 12937114
R#1 23.73 (0.00)
Q 362.90>319.00 (-) 3.66e6



R1 362.90>169.00 (-) 8.67e5



PFHpA-13C_IS
Conc 5.0000
RT 4.365 Area 4560381
ISTD 366.90>322.10 (-) 1.29e6



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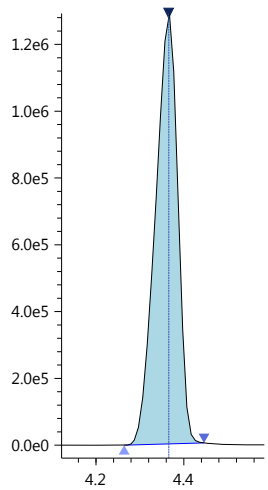
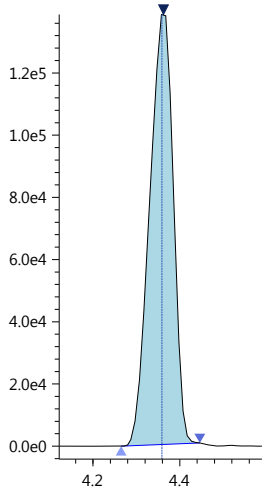
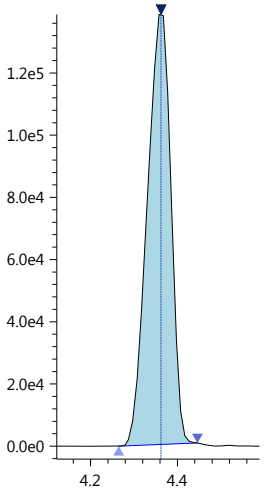
PFHpA-13C
Conc 5.2300
RT 4.365 Area 4560381
Q 366.90>322.10 (-) 1.29e6



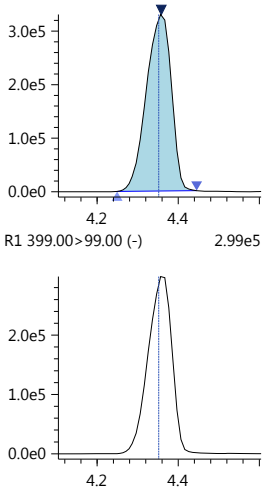
PFHxS-18O_IS
Conc 5.0000
RT 4.362 Area 525088
ISTD 402.70>84.05 (-) 1.39e5



PFHxS-18O
Conc 4.9713
RT 4.362 Area 525088
Q 402.70>84.05 (-) 1.39e5

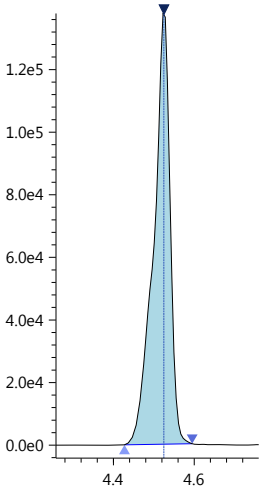


PFHxS_1
Conc 13.5378
RT 4.358 Area 1412469
R#1 90.07 (0.00)
Q 399.00>80.00 (-) 3.31e5

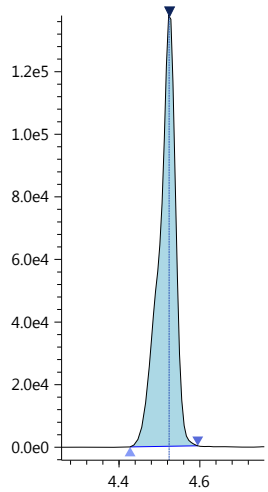


R1 399.00>99.00 (-) 2.99e5

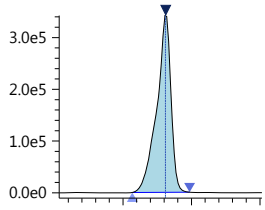
6_2-FTS-13C
Conc 5.1958
RT 4.525 Area 388770
Q 428.90>409.00 (-) 1.38e5



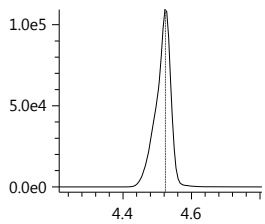
6_2-FTS-13C_IS
Conc 5.0000
RT 4.525 Area 388770
ISTD 428.90>409.00 (-) 1.38e5



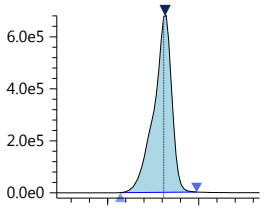
6_2-FTS_1
Conc 12.8546
RT 4.525 Area 988715
R#1 31.86 (0.00)
Q 427.00>407.00 (-) 3.43e5



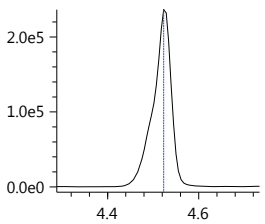
R1 427.00>80.90 (-) 1.09e5



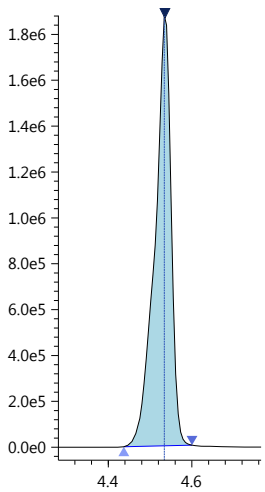
PFHpS_1
Conc 14.7935
RT 4.526 Area 1858780
R#1 35.09 (0.00)
Q 449.00>80.15 (-) 6.82e5



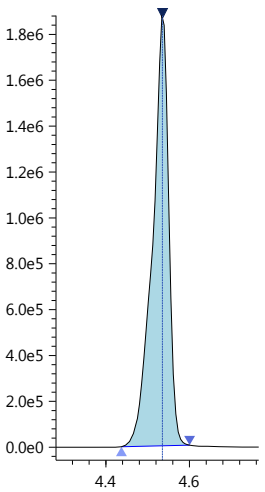
R1 449.00>99.20 (-) 2.36e5



PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 5039759
ISTD 416.80>372.05 (-) 1.88e6



PFOA-13C
Conc 5.0729
RT 4.536 Area 5039759
Q 416.80>372.05 (-) 1.88e6



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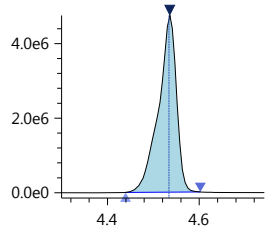
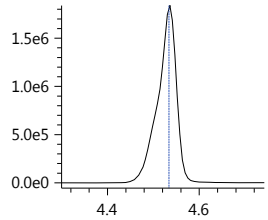
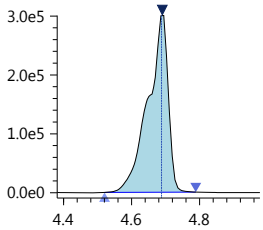
PFOA
Conc 15.0086
RT 4.536 Area 12810853
R#1 38.60 (0.00)
Q 413.00>369.00 (-) 4.75e6



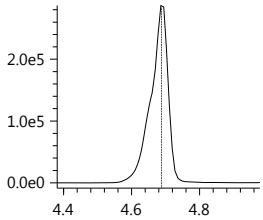
R1 413.00>169.10 (-) 1.84e6



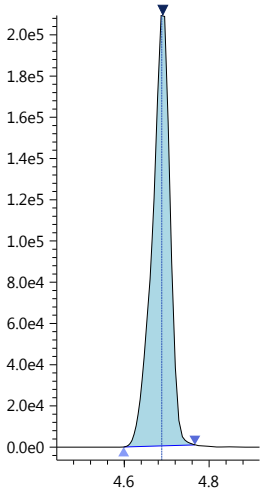
PFOS_1
Conc 14.1262
RT 4.690 Area 1244981
R#1 95.43 (0.00)
Q 499.00>80.00 (-) 3.01e5



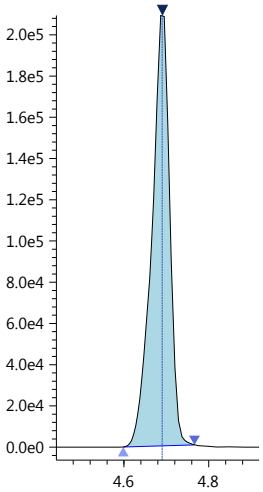
R1 499.00>99.00 (-) 2.87e5



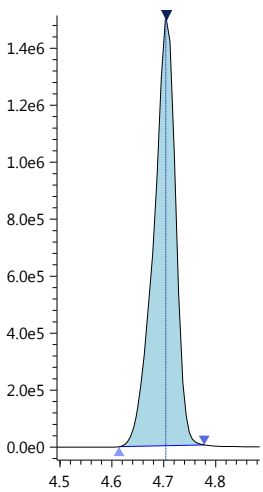
PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 615562
ISTD 502.80>80.05 (-) 2.09e5



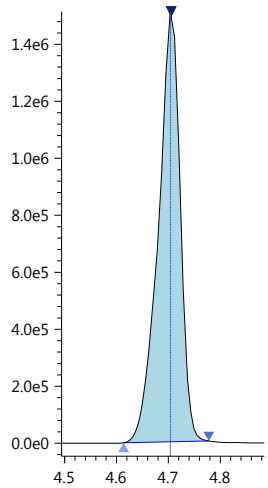
PFOS-13C
Conc 5.1690
RT 4.691 Area 615562
Q 502.80>80.05 (-) 2.09e5



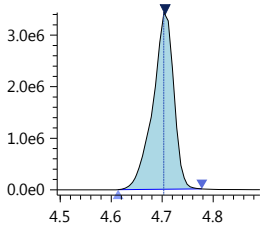
PFNA-13C_IS
Conc 5.0000
RT 4.705 Area 4420742
ISTD 467.80>423.00 (-) 1.52e6



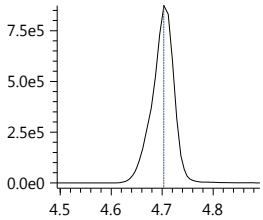
PFNA-13C
Conc 5.1593
RT 4.705 Area 4420742
Q 467.80>423.00 (-) 1.52e6



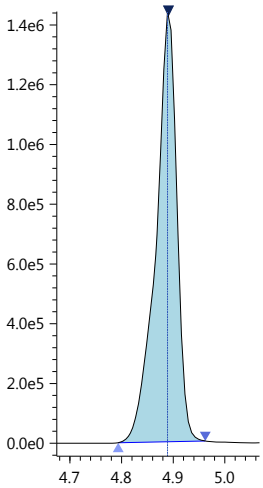
PFNA
Conc 15.6034
RT 4.706 Area 9759028
R#1 25.44 (0.00)
Q 463.00>418.90 (-) 3.44e6



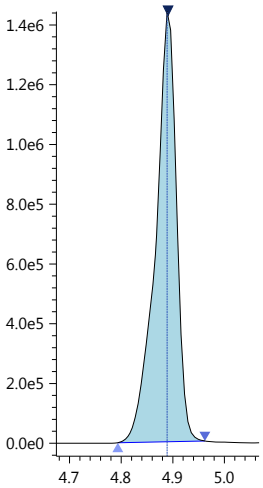
R1 463.00>219.00 (-) 8.73e5



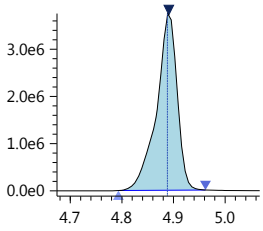
PFDA-13C_IS
Conc 5.0000
RT 4.891 Area 4051957
ISTD 514.80>469.95 (-) 1.44e6



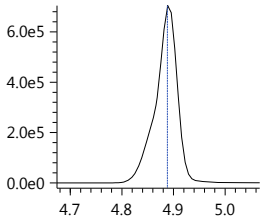
PFDA-13C
Conc 5.1039
RT 4.891 Area 4051957
Q 514.80>469.95 (-) 1.44e6



PFDA
Conc 15.0979
RT 4.891 Area 10337465
R#1 18.72 (0.00)
Q 513.00>468.80 (-) 3.75e6



R1 513.00>219.10 (-) 7.04e5



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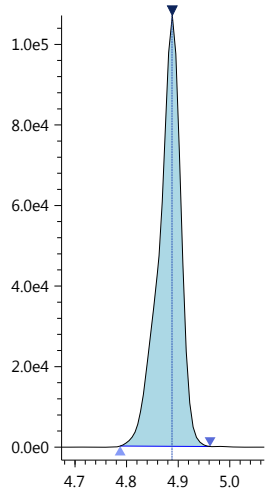
8_2-FTS-13C_IS

Conc 5.0000
RT 4.888 Area 312417

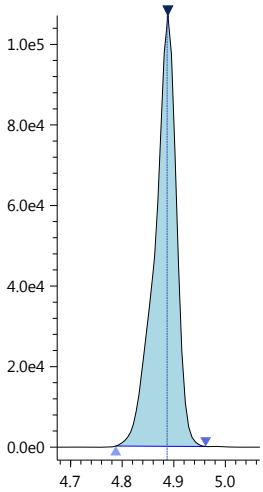
ISTD 528.80>509.00 (-) 1.07e5



8_2-FTS-13C

Conc 5.2961
RT 4.888 Area 312417

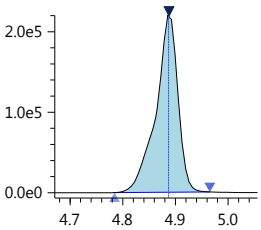
Q 528.80>509.00 (-) 1.07e5



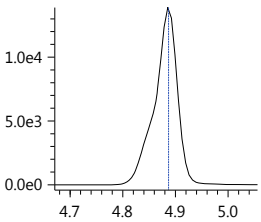
8_2-FTS_1

Conc 12.8720
RT 4.888 Area 638580
R#1 6.31 (0.00)

Q 527.10>506.90 (-) 2.20e5



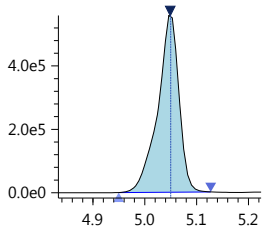
R1 527.20>487.00 (-) 1.39e4



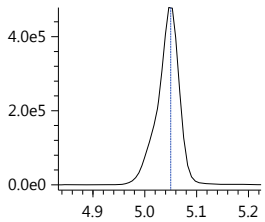
PFDS_1

Conc 14.9716
RT 5.049 Area 1590254
R#1 86.81 (0.00)

Q 599.00>79.90 (-) 5.59e5



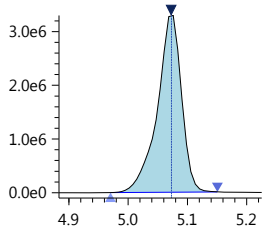
R1 599.00>99.10 (-) 4.79e5



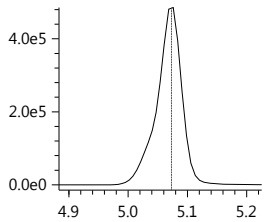
PFUnA

Conc 15.1013
RT 5.073 Area 9355607
R#1 14.66 (0.00)

Q 563.00>518.90 (-) 3.30e6



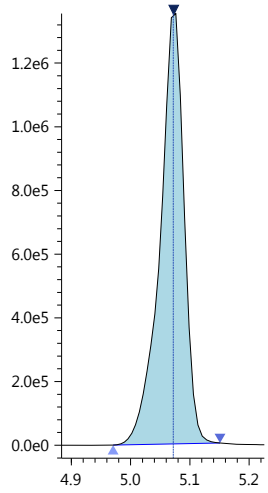
R1 563.00>219.00 (-) 4.86e5



PFUnA-13C_IS

Conc 5.0000
RT 5.073 Area 3831732

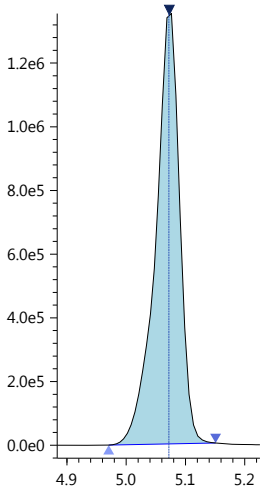
ISTD 564.80>519.95 (-) 1.36e6



PFUnA-13C

Conc 4.9623
RT 5.073 Area 3831732

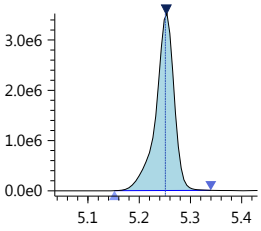
Q 564.80>519.95 (-) 1.36e6



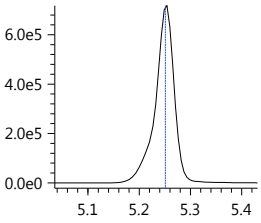
PFDoA

Conc 15.1584
RT 5.253 Area 8708712
R#1 20.60 (0.00)

Q 613.05>569.00 (-) 3.53e6



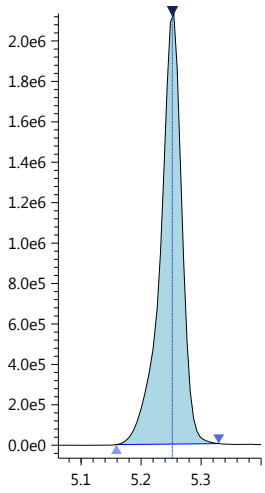
R1 613.05>169.00 (-) 7.18e5



PFDoA-13C

Conc 5.0296
RT 5.252 Area 5308475

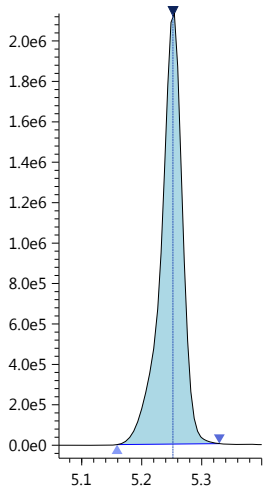
Q 614.80>569.95 (-) 2.14e6



PFDoA-13C_IS

Conc 5.0000
RT 5.252 Area 5308475

ISTD 614.80>569.95 (-) 2.14e6



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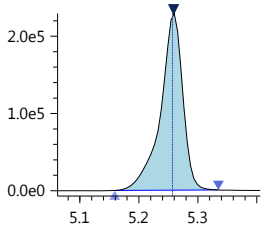
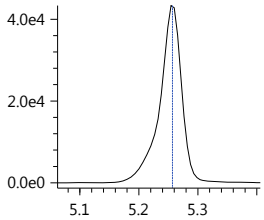
10_2-FtS_1

Conc 13.0768
RT 5.259 Area 597189
R#1 19.83 (0.00)

Q 627.00>606.95 (-) 2.30e5



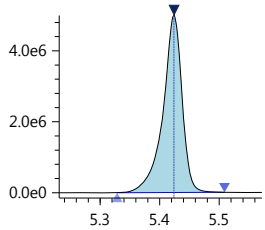
R1 627.00>81.25 (-) 4.33e4



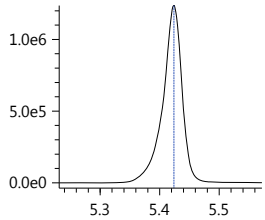
PFTrDA

Conc 14.9886
RT 5.424 Area 11125488
R#1 25.02 (0.00)

Q 663.00>618.90 (-) 5.00e6



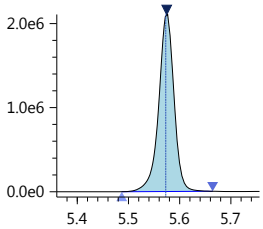
R1 662.90>169.00 (-) 1.24e6



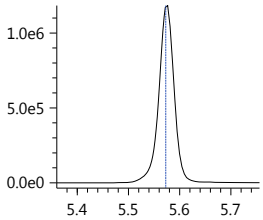
PFTeDA

Conc 14.9059
RT 5.575 Area 4357510
R#1 55.85 (0.00)

Q 713.40>669.00 (-) 2.11e6



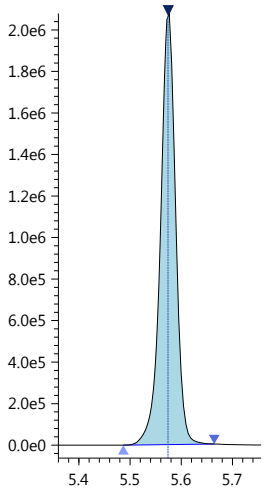
R1 713.40>169.10 (-) 1.18e6



PFTeDA-13C

Conc 5.1398
RT 5.575 Area 4273086

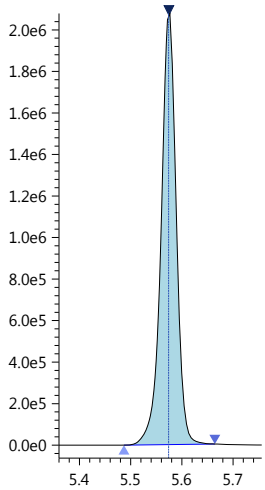
Q 714.70>669.90 (-) 2.08e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.575 Area 4273086

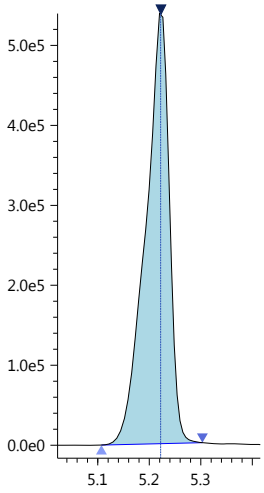
ISTD 714.70>669.90 (-) 2.08e6



FOSA-13C_IS

Conc 5.0000
RT 5.223 Area 1722393

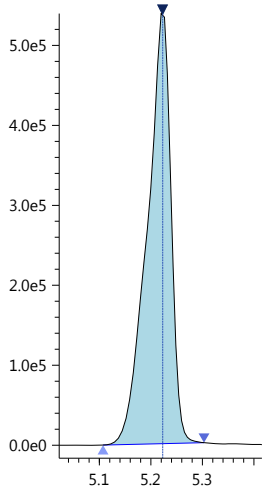
ISTD 506.00>78.05 (-) 5.40e5



FOSA-13C

Conc 5.2140
RT 5.223 Area 1722393

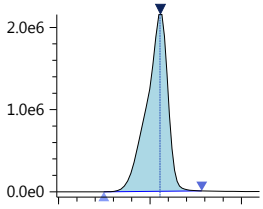
Q 506.00>78.05 (-) 5.40e5



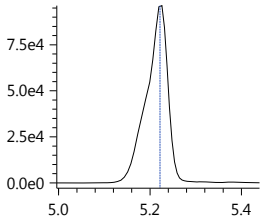
FOSA

Conc 14.9621
RT 5.223 Area 6901113
R#1 4.43 (0.00)

Q 498.20>78.00 (-) 2.16e6



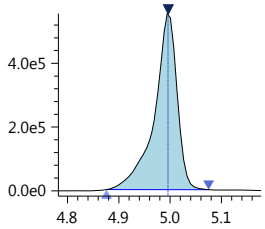
R1 498.20>64.10 (-) 9.63e4



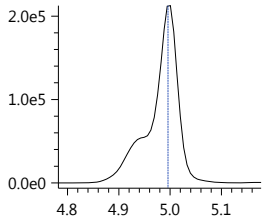
N-MeFOSAA

Conc 14.5388
RT 4.996 Area 1694246
R#1 37.80 (0.00)

Q 570.20>419.00 (-) 5.56e5



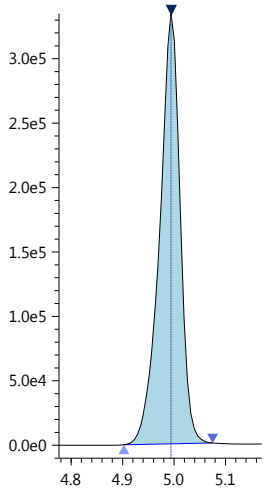
R1 570.20>512.00 (-) 2.13e5



N-MeFOSAA-d3

Conc 5.2593
RT 4.995 Area 925646

Q 572.80>419.05 (-) 3.35e5



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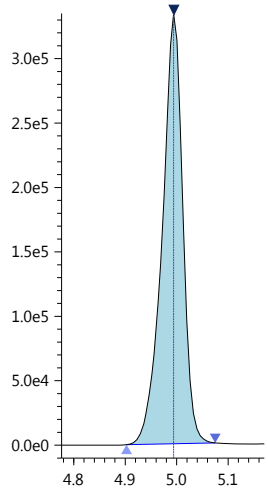
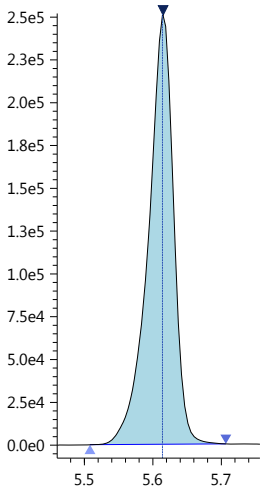
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.995 Area 925646

ISTD 572.80>419.05 (-) 3.35e5



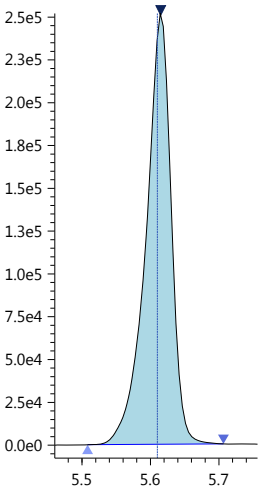
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.615 Area 644797

ISTD 514.90>168.90 (-) 2.52e5



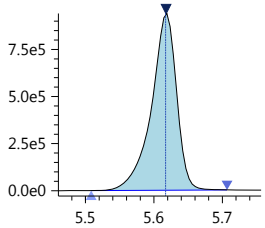
N-MeFOSA-d3
Conc 5.5295
RT 5.615 Area 644797

Q 514.90>168.90 (-) 2.52e5

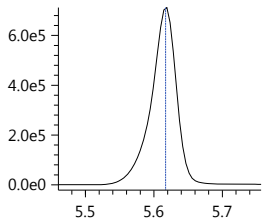


N-MeFOSA
Conc 14.5346
RT 5.618 Area 2395912
R#1 77.01 (0.00)

Q 512.00>169.10 (-) 9.41e5

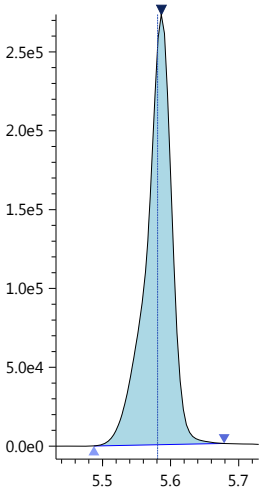


R1 512.00>219.00 (-) 7.12e5



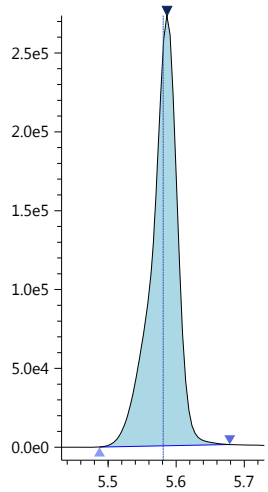
N-MeFOSE-d7
Conc 4.9935
RT 5.587 Area 704512

Q 622.70>59.10 (-) 2.74e5



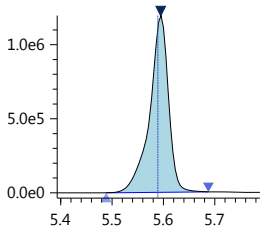
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.587 Area 704512

ISTD 622.70>59.10 (-) 2.74e5

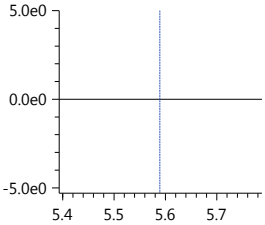


N-MeFOSE
Conc 15.5064
RT 5.595 Area 3006303
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 1.20e6

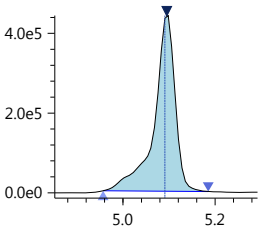


R1 556.00>121.20 (-) 0.00e0

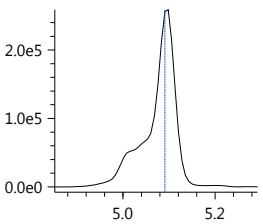


N-EtFOSAA
Conc 15.2903
RT 5.095 Area 1385571
R#1 58.10 (0.00)

Q 584.20>418.95 (-) 4.45e5

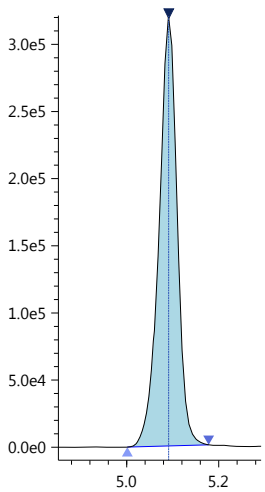


R1 584.20>526.10 (-) 2.59e5



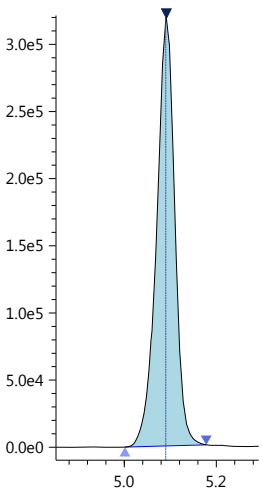
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.091 Area 878388

ISTD 588.80>419.00 (-) 3.21e5



N-EtFOSAA-d5
Conc 5.1994
RT 5.091 Area 878388

Q 588.80>419.00 (-) 3.21e5



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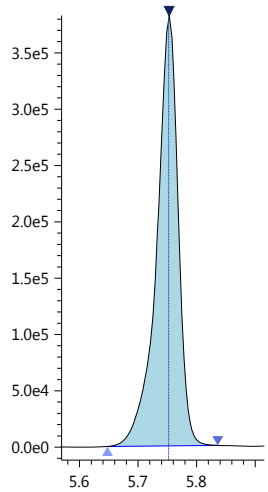
Printed at 1/21/2019 10:49:39 AM

N-EtFOSA-d9_IS

Conc 5.0000
RT 5.753 Area 972037

ISTD 530.90>169.15 (-) 3.83e5



N-EtFOSA-d9

Conc 5.3385
RT 5.753 Area 972037

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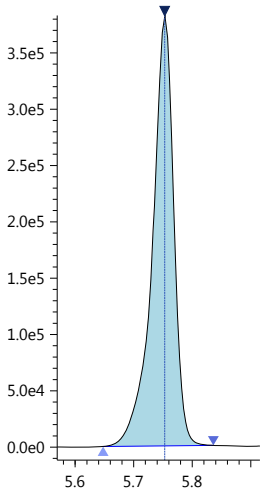
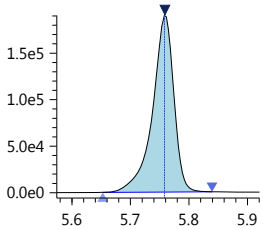


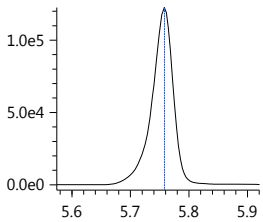
N-EtFOSA

Conc 15.4509
RT 5.759 Area 480064
R#1 65.14 (0.00)

Q 526.90>169.10 (-) 1.91e5



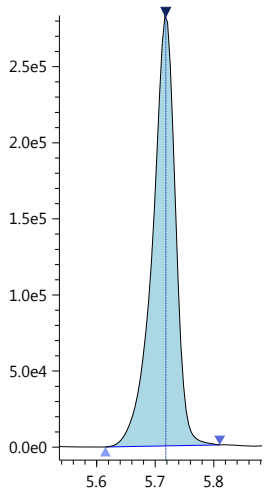
R1 526.90>219.00 (-) 1.23e5



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.718 Area 773412

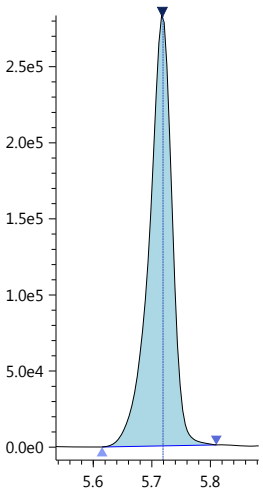
ISTD 638.70>59.10 (-) 2.84e5



N-EtFOSE-d9

Conc 4.9728
RT 5.718 Area 773412

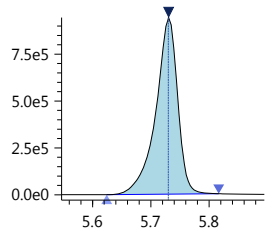
Q 638.70>59.10 (-) 2.84e5



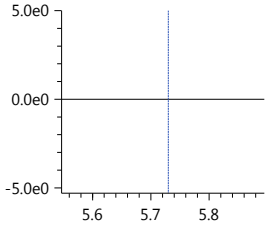
N-EtFOSE

Conc 15.4246
RT 5.731 Area 2451685
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 9.45e5



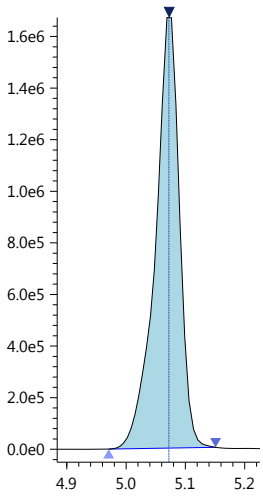
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.073 Area 4746887

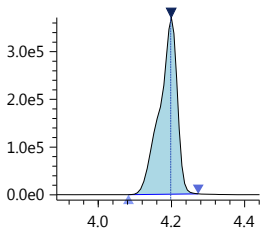
ISTD 570.00>525.00 (-) 1.67e6



PFPeS

Conc 13.4358
RT 4.199 Area 1236059
R#1 148.81 (0.00)

Q 349.00>99.00 (-) 3.72e5



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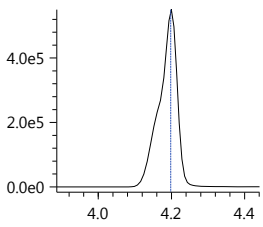
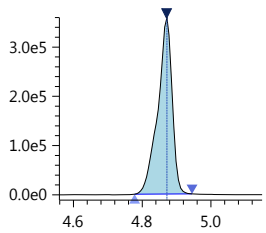


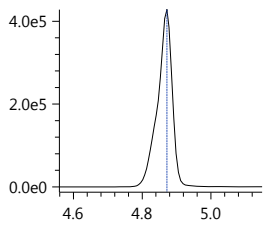
PFNS

Conc 14.1455
RT 4.871 Area 1037948
R#1 118.91 (0.00)

Q 549.00>99.00 (-) 3.60e5



R1 549.00>79.95 (-) 4.28e5



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Printed at 1/21/2019 9:31:25 AM

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Date acquired: 1/18/2019 6:49:52 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_029.lcd
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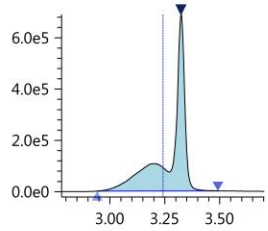
PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2770370
ISTD 216.90>172.15 (-) 6.91e5



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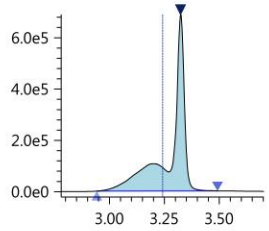

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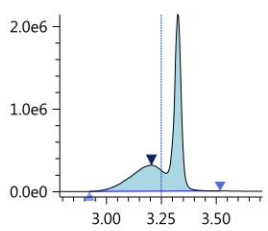
Conc 3.1021
RT 3.205 Area 8236041
Q 213.00>169.10 (-) 2.15e6



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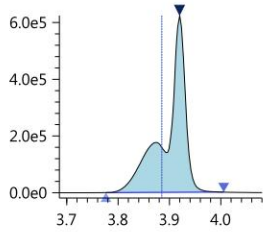
ISTD 267.90>223.00 (-) 6.25e5



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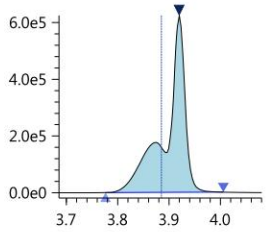
Q 267.90>223.00 (-) 6.25e5



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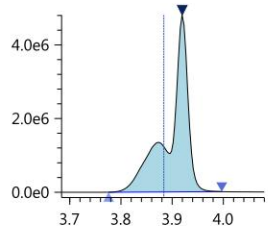
Q 263.05>219.10 (-) 4.81e6



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Conc 2.9177
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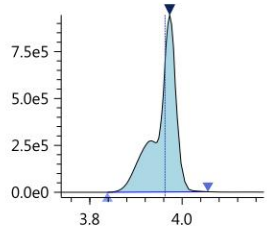
Q 299.00>80.00 (-) 9.45e5



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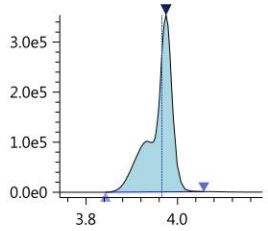
RT 3.975 Area 984694
Q 301.80>80.00 (-) 3.54e5



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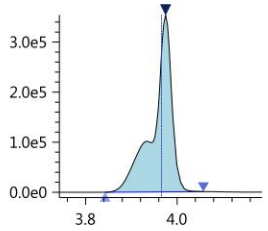

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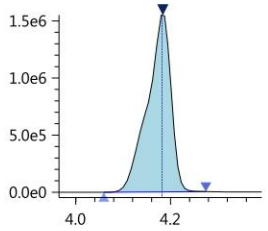

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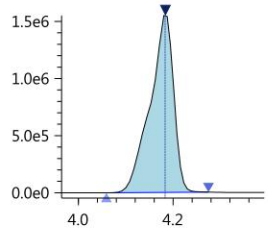

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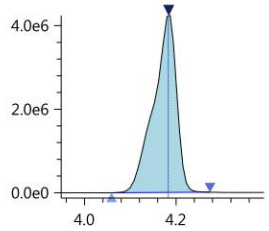
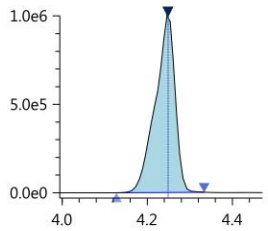
Conc 3.2883
RT 4.184 Area 14728500
Q 313.00>269.00 (-) 4.24e6



HPFO_DA
Conc 3.3150
RT 4.248 Area 3232814
Q 329.00>169.00 (-) 1.00e6



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Conc 5.0000
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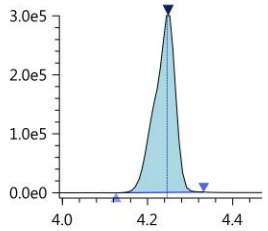
ISTD 332.00>286.80 (-) 3.01e5



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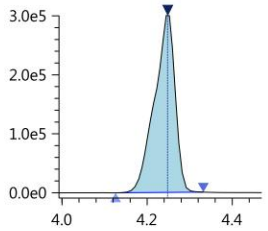

4_2-FTS-13C_IS
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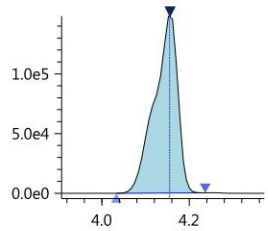
RT 4.156 Area 552080
ISTD 328.80>309.05 (-) 1.48e5



4_2-FTS-13C
Conc 5.1907
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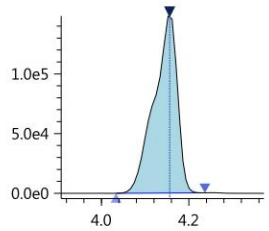

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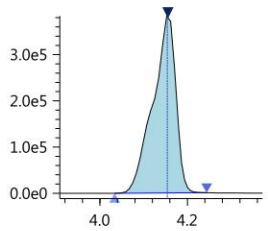
Conc 3.0228
RT 4.156 Area 1396235
Q 327.00>307.05 (-) 3.84e5



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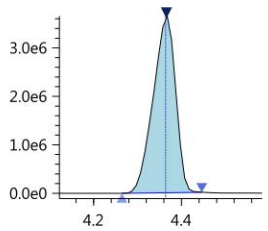
RT 4.366 Area 12937114
Q 362.90>319.00 (-) 3.66e6



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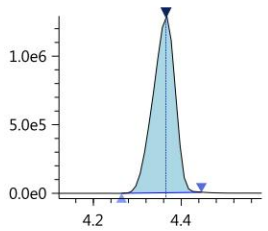
ISTD 366.90>322.10 (-) 1.29e6



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PFHpA-13C
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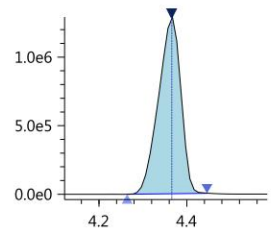
Q 366.90>322.10 (-) 1.29e6



PFHxS-18O_IS
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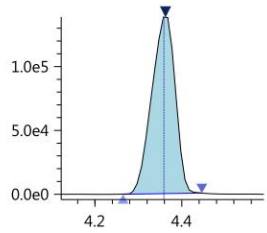
ISTD 402.70>84.05 (-) 1.39e5



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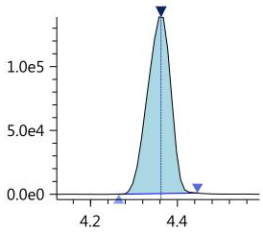

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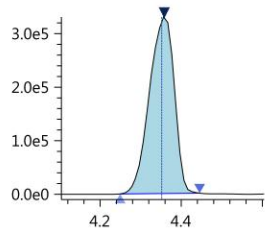
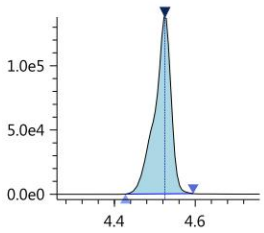
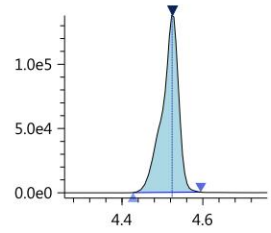
RT 4.358 Area 1412469
Q 399.00>80.00 (-) 3.31e5



6_2-FTS-13C
Conc 5.1958
RT 4.525 Area 388770
Q 428.90>409.00 (-) 1.38e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.525 Area 388770
ISTD 428.90>409.00 (-) 1.38e5



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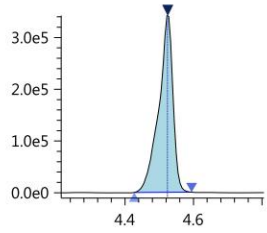
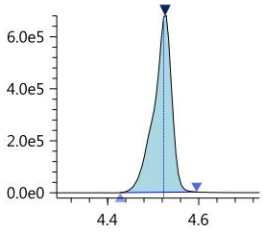
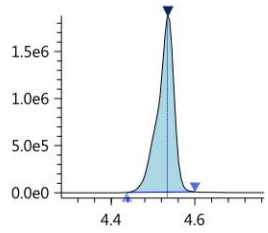
Conc 3.0630
RT 4.525 Area 988715
Q 427.00>407.00 (-) 3.43e5



PFHpS_1
Conc 3.1507
RT 4.526 Area 1858780
Q 449.00>80.15 (-) 6.82e5



PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 5039759
ISTD 416.80>372.05 (-) 1.88e6



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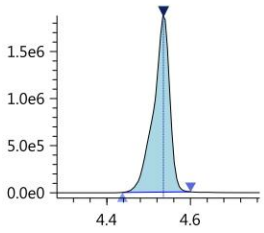
RT 4.536 Area 5039759
Q 416.80>372.05 (-) 1.88e6



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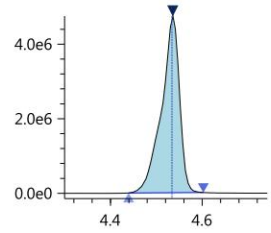
Q 413.00>369.00 (-) 4.75e6



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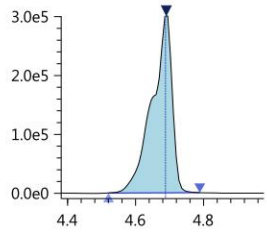

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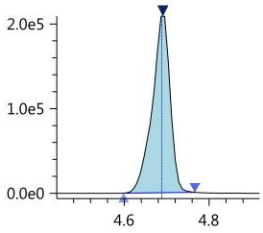

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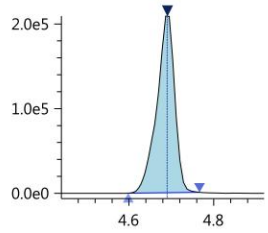
RT 4.691 Area 615562
Q 502.80>80.05 (-) 2.09e5



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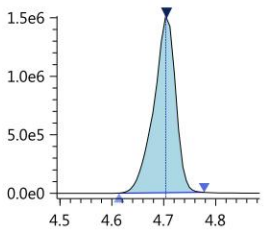
Conc 5.0000
RT 4.705 Area 4420742
ISTD 467.80>423.00 (-) 1.52e6



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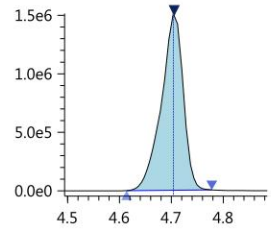
Conc 5.1593
RT 4.705 Area 4420742
Q 467.80>423.00 (-) 1.52e6



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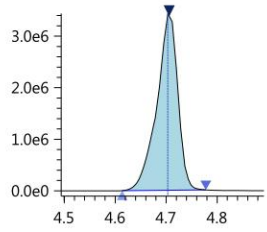
Q 463.00>418.90 (-) 3.44e6



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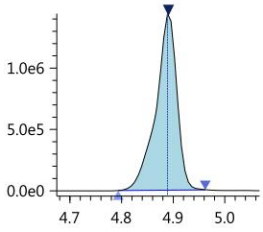
RT 4.891 Area 4051957
ISTD 514.80>469.95 (-) 1.44e6



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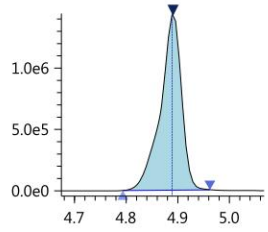

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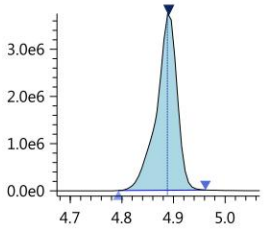

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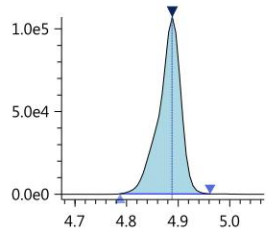
8_2-FTS-13C_IS
Conc 5.0000
RT 4.888 Area 312417
ISTD 528.80>509.00 (-) 1.07e5



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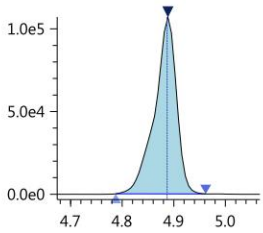

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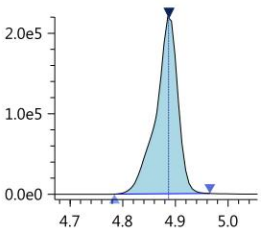
Q 527.10>506.90 (-) 2.20e5



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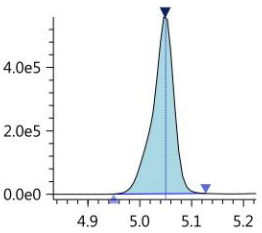
Q 599.00>79.90 (-) 5.59e5



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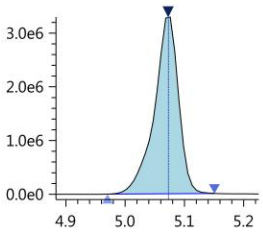

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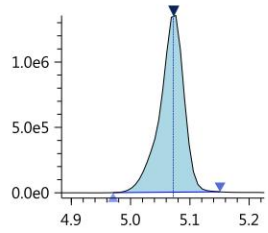
ISTD 564.80>519.95 (-) 1.36e6



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Conc 4.9623
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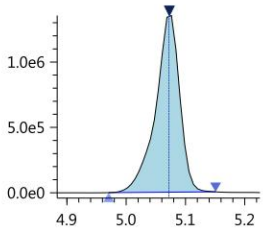

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Conc 3.3341
RT 5.253 Area 8708712
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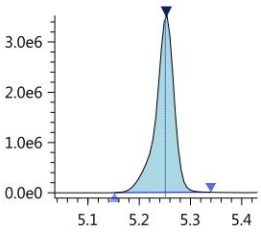

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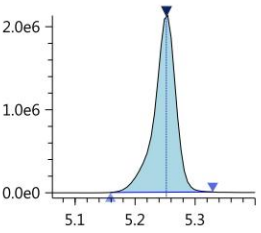
Q 614.80>569.95 (-) 2.14e6



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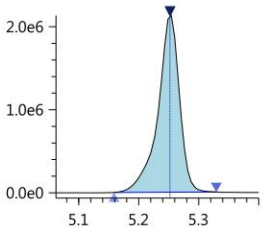
ISTD 614.80>569.95 (-) 2.14e6



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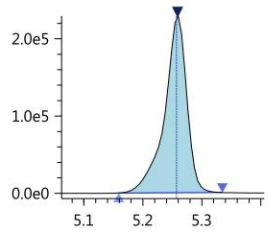
Q 627.00>606.95 (-) 2.30e5



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Conc 3.3000
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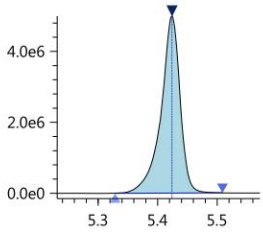

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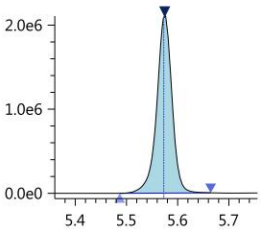
Q 713.40>669.00 (-) 2.11e6



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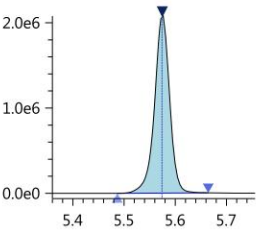
Q 714.70>669.90 (-) 2.08e6



PFTeDA-13C_IS
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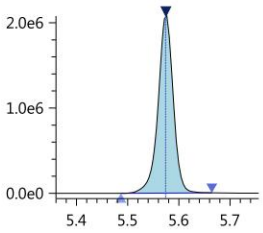
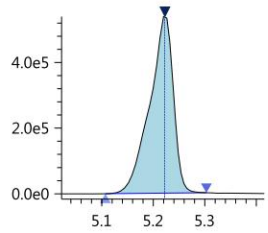
ISTD 714.70>669.90 (-) 2.08e6



FOSA-13C_IS
Conc 5.0000
RT 5.223 Area 1722393
ISTD 506.00>78.05 (-) 5.40e5



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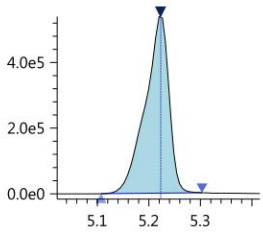
Conc 5.2140
RT 5.223 Area 1722393
Q 506.00>78.05 (-) 5.40e5



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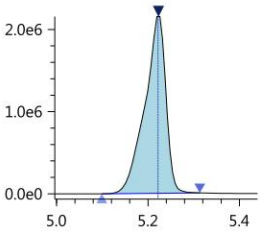
Q 498.20>78.00 (-) 2.16e6



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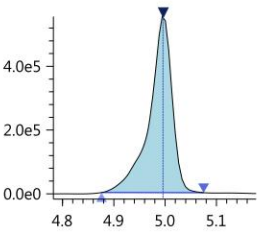
Conc 3.3279
RT 4.996 Area 1694246
Q 570.20>419.00 (-) 5.56e5



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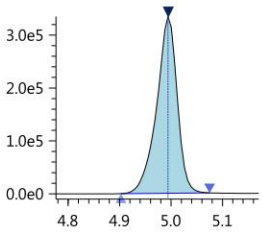
RT 4.995 Area 925646
Q 572.80>419.05 (-) 3.35e5



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N-MeFOSAA-d3_IS
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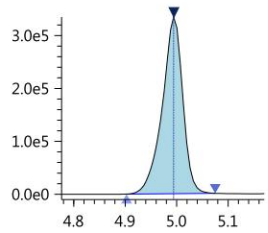
ISTD 572.80>419.05 (-) 3.35e5



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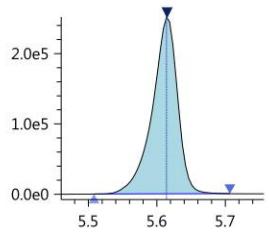
ISTD 514.90>168.90 (-) 2.52e5



N-MeFOSA-d3
Conc 5.5295
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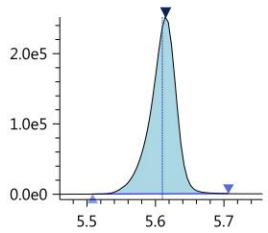
Q 514.90>168.90 (-) 2.52e5



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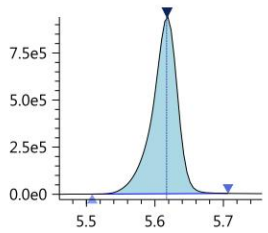
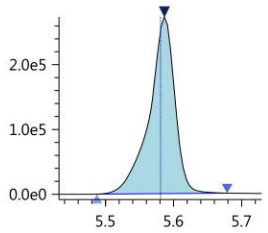
RT 5.618 Area 2395912
Q 512.00>169.10 (-) 9.41e5



N-MeFOSE-d7
Conc 4.9935
RT 5.587 Area 704512
Q 622.70>59.10 (-) 2.74e5



N-MeFOSE-d7_IS
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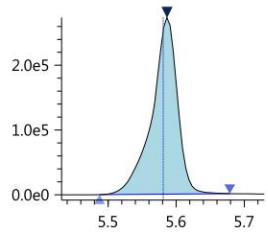
ISTD 622.70>59.10 (-) 2.74e5



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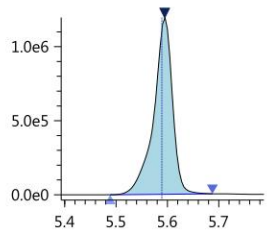
RT 5.595 Area 3006303
Q 616.00>59.00 (-) 1.20e6



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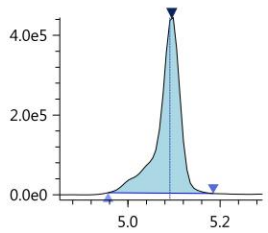
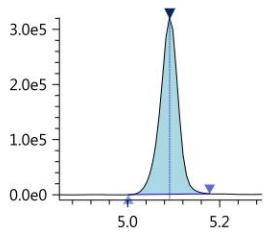
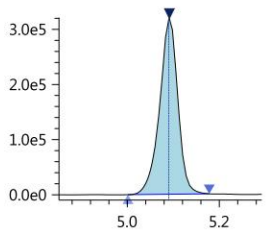
RT 5.095 Area 1385571
Q 584.20>418.95 (-) 4.45e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.091 Area 878388
ISTD 588.80>419.00 (-) 3.21e5



N-EtFOSAA-d5
Conc 5.1994
RT 5.091 Area 878388
Q 588.80>419.00 (-) 3.21e5



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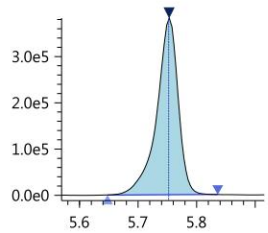
Conc 5.0000
RT 5.753 Area 972037
ISTD 530.90>169.15 (-) 3.83e5



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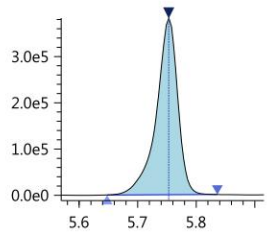
Conc 5.3385
RT 5.753 Area 972037
Q 530.90>169.15 (-) 3.83e5



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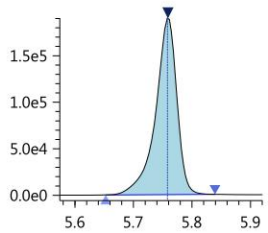
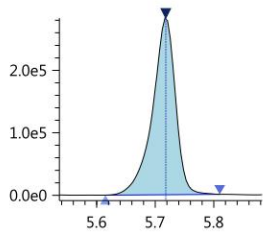
Conc 3.3048
RT 5.759 Area 480064
Q 526.90>169.10 (-) 1.91e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.718 Area 773412
ISTD 638.70>59.10 (-) 2.84e5



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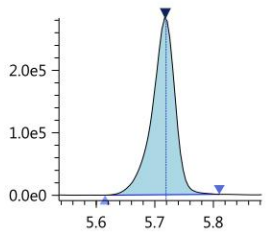
RT 5.718 Area 773412
Q 638.70>59.10 (-) 2.84e5



N-EtFOSE
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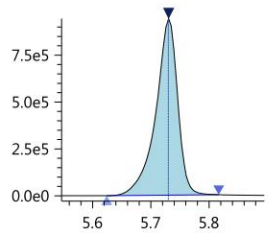
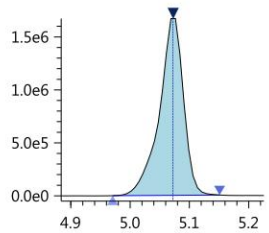
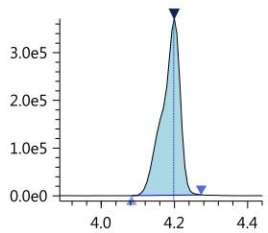
RT 5.731 Area 2451685
Q 630.00>58.90 (-) 9.45e5



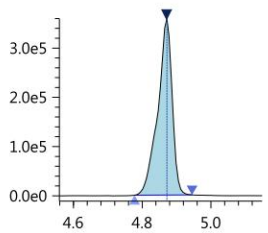
13C7-PFUnDA_IS
Conc 5.0000
RT 5.073 Area 4746887
ISTD 570.00>525.00 (-) 1.67e6



PFPeS
Conc 3.0707
RT 4.199 Area 1236059
Q 349.00>99.00 (-) 3.72e5



PFNS
Conc 3.1490
RT 4.871 Area 1037948
Q 549.00>99.00 (-) 3.60e5



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_030

Sample ID: IB
Date acquired: 1/18/2019 7:00:19 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_030.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.331	2712774	2712774	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.331	2712774	5098432	26	4.9294	ng/mL	----
PFBA	ND(W/B)	----	----	2712774	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.925	1636029	1636029	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.925	1636029	5098432	26	4.8825	ng/mL	----
PFPeA	Auto	3.925	78963	1636029	4	0.0058	ng/mL	----
PFBS_1	M	3.981	248	994892	16	0.0012	ng/mL	----
PFBS-13C	Auto	3.981	994892	5098432	26	4.9643	ng/mL	----
PFBS-13C_IS	Auto	3.981	994892	994892	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.190	5739939	5739939	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.190	5739939	5098432	26	5.0347	ng/mL	----
PFHxA	M	4.189	14679	5739939	6	0.0156	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1085067	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.254	1085067	1085067	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.254	1085067	5098432	26	5.0720	ng/mL	----
4_2-FTS-13C_IS	Auto	4.163	541260	541260	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.163	541260	5098432	26	4.7381	ng/mL	----
4_2-FTS_1	M	4.161	76	541260	5	0.0007	ng/mL	----
PFHpA	M	4.376	4398	4587767	8	0.0140	ng/mL	----
PFHpA-13C_IS	Auto	4.370	4587767	4587767	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.370	4587767	5098432	26	4.8986	ng/mL	----
PFHxS-18O_IS	Auto	4.370	610903	610903	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.370	610903	5098432	26	5.3850	ng/mL	----
PFHxS_1	M	4.370	1467	610903	7	0.0121	ng/mL	----
6_2-FTS-13C	Auto	4.532	394490	5098432	26	4.9088	ng/mL	----
6_2-FTS-13C_IS	Auto	4.532	394490	394490	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.526	322	394490	10	0.0041	ng/mL	----
PFHpS_1	Auto	4.537	175	610903	7	0.0012	ng/mL	----
PFOA-13C_IS	Auto	4.542	5434454	5434454	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.542	5434454	5098432	26	5.0930	ng/mL	----
PFOA	M	4.541	11970	5434454	9	0.0088	ng/mL	----
PFOS_1	M	4.695	291	650998	13	0.0031	ng/mL	----
PFOS-13C_IS	Auto	4.697	650998	650998	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.697	650998	5098432	26	5.0896	ng/mL	----
PFNA-13C_IS	Auto	4.710	4409684	4409684	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.710	4409684	5098432	26	4.7915	ng/mL	----
PFNA	M	4.706	4784	4409684	11	0.0127	ng/mL	----
PFDA-13C_IS	Auto	4.896	4353598	4353598	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.896	4353598	5098432	26	5.1058	ng/mL	----
PFDA	M	4.887	4074	4353598	12	0.0055	ng/mL	----
8_2-FTS-13C_IS	Auto	4.893	316250	316250	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.893	316250	5098432	26	4.9915	ng/mL	----
8_2-FTS_1	M	4.897	91	316250	15	0.0018	ng/mL	----
PFDS_1	ND(W/B)	----	----	650998	13	----	ng/mL	----
PFUnA	M	5.078	12786	4250015	14	0.0133	ng/mL	----
PFUnA-13C_IS	Auto	5.079	4250015	4250015	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.079	4250015	5098432	26	5.1245	ng/mL	----
PFDoA	Auto	5.267	2857	5669403	17	0.0074	ng/mL	----
PFDoA-13C	Auto	5.259	5669403	5098432	26	5.0012	ng/mL	----
PFDoA-13C_IS	Auto	5.259	5669403	5669403	17	5.0000	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	316250	15	----	ng/mL	----
PFTrDA	Auto	5.431	6620	4543349	22	0.0118	ng/mL	----
PFTeDA	Auto	5.580	32106	4543349	22	0.0096	ng/mL	----
PFTeDA-13C	Auto	5.581	4543349	5098432	26	5.0880	ng/mL	----
PFTeDA-13C_IS	Auto	5.581	4543349	4543349	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.229	1765788	1765788	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.229	1765788	5098432	26	4.9768	ng/mL	----
FOSA	Auto	5.230	3544	1765788	18	0.0075	ng/mL	----
N-MeFOSAA	M	5.003	3742	931501	19	0.0319	ng/mL	----
N-MeFOSAA-d3	Auto	5.001	931501	5098432	26	4.9277	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.001	931501	931501	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.621	625522	625522	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.621	625522	5098432	26	4.9943	ng/mL	----
N-MeFOSA	M	5.620	1391	625522	1	0.0087	ng/mL	----
N-MeFOSE-d7	Auto	5.592	781225	5098432	26	5.1554	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.592	781225	781225	20	5.0000	ng/mL	----
N-MeFOSE	M	5.604	593	781225	20	0.0028	ng/mL	----

Insight Report

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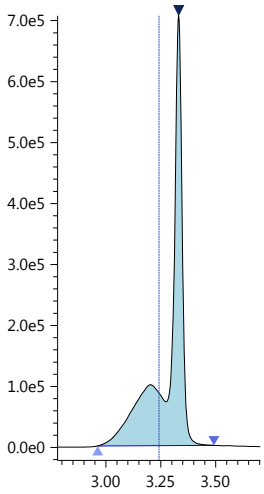
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.104	4030	892849	21	0.0568	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.097	892849	892849	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.097	892849	5098432	26	4.9206	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.760	945359	945359	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.760	945359	5098432	26	4.8340	ng/mL	----
N-EtFOSA	M	5.763	381	945359	23	0.0126	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.725	811771	811771	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.725	811771	5098432	26	4.8596	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	811771	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.079	5098432	5098432	26	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	994892	16	----	ng/mL	----
PFNS	ND(W/B)	----	----	650998	13	----	ng/mL	----

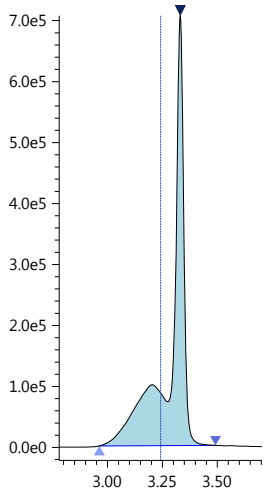
PFBA-13C_IS

Conc 5.0000
RT 3.331 Area 2712774
ISTD 216.90>172.15 (-) 7.08e5



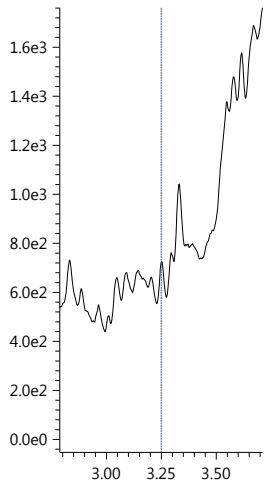
PFBA-13C

Conc 4.9294
RT 3.331 Area 2712774
Q 216.90>172.15 (-) 7.08e5



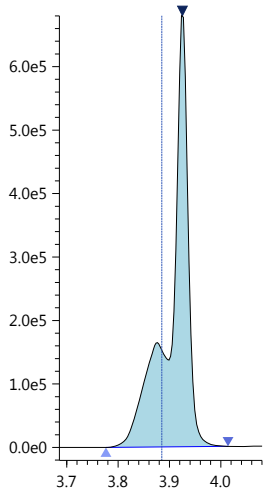
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.76e3



PFPeA-13C_IS

Conc 5.0000
RT 3.925 Area 1636029
ISTD 267.90>223.00 (-) 6.80e5



PFPeA-13C

Conc 4.8825
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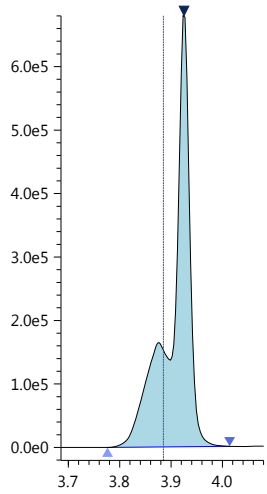
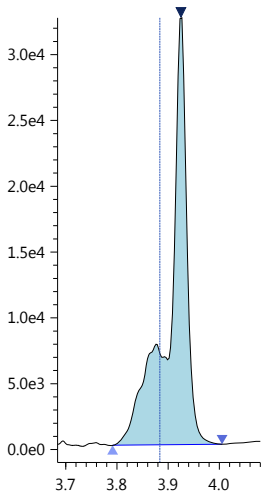
Q 267.90>223.00 (-) 6.80e5



PFPeA

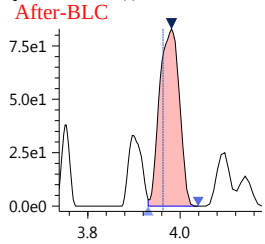
Conc 0.0058
RT 3.925 Area 78963
Q 263.05>219.10 (-) 3.28e4



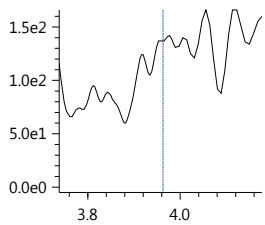
PFBS_1

Conc 0.0012
RT 3.981 Area 248
R#1 34.83 (0.00)
Q 299.00>80.00 (-) 8.30e1

After-BLC

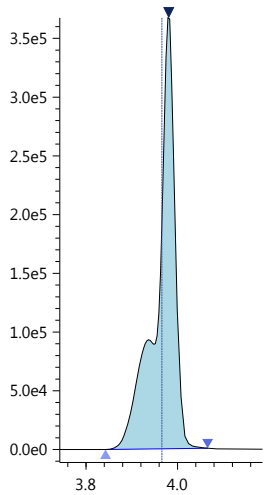


R1 298.80>99.00 (-) 1.66e2



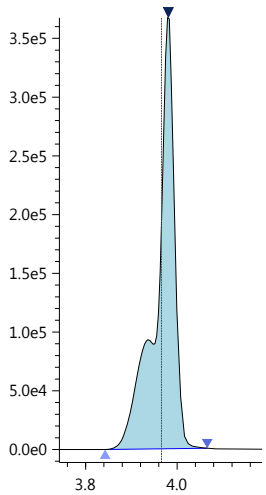
PFBS-13C

Conc 4.9643
RT 3.981 Area 994892
Q 301.80>80.00 (-) 3.67e5



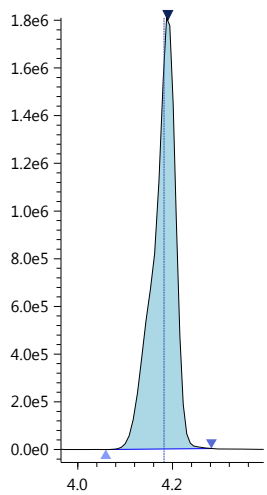
PFBS-13C_IS

Conc 5.0000
RT 3.981 Area 994892
ISTD 301.80>80.00 (-) 3.67e5



PFHxA-13C_IS

Conc 5.0000
RT 4.190 Area 5739939
ISTD 314.90>270.10 (-) 1.81e6



Insight Report

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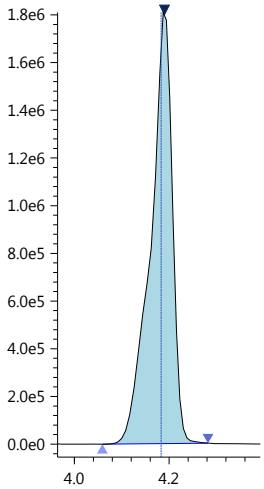
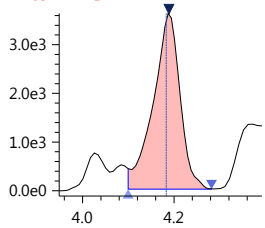
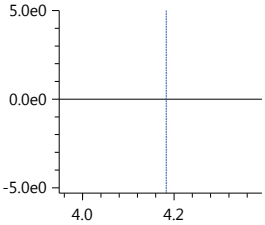
PFHxA-13C
Conc 5.0347
RT 4.190 Area 5739939
Q 314.90>270.10 (-) 1.81e6



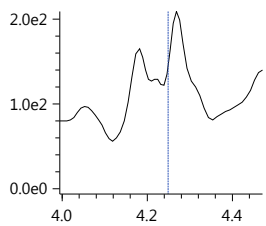
PFHxA
Conc 0.0156
RT 4.189 Area 14679
R#1 0.00 (0.00)
Q 313.00>269.00 (-) 3.64e3
After-BLC



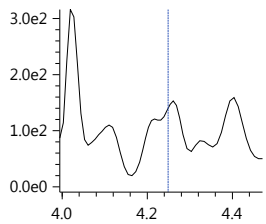
R1 313.00>119.10 (-) 0.00e0



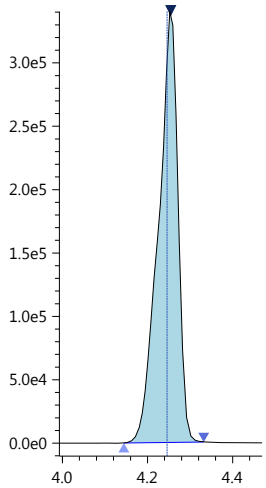
HPFO_DA
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 329.00>169.00 (-) 2.09e2



R1 329.00>285.10 (-) 3.16e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.254 Area 1085067
ISTD 332.00>286.80 (-) 3.41e5



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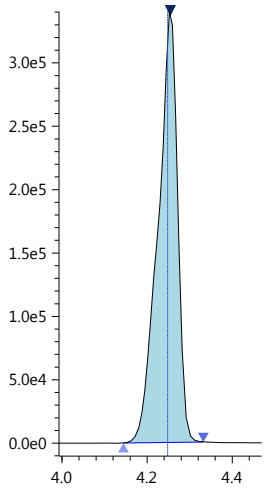
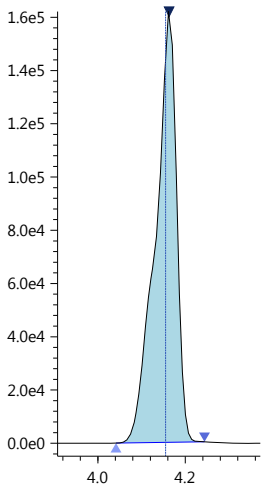
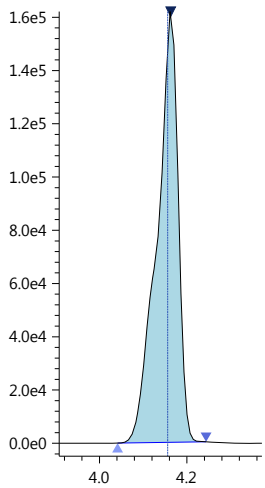
Conc 5.0720
RT 4.254 Area 1085067
Q 332.00>286.80 (-) 3.41e5



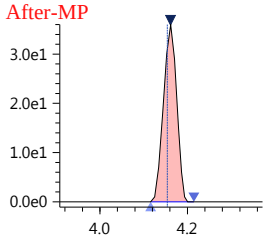
4_2-FTS-13C_IS
Conc 5.0000
RT 4.163 Area 541260
ISTD 328.80>309.05 (-) 1.62e5



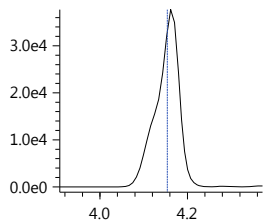
4_2-FTS-13C
Conc 4.7381
RT 4.163 Area 541260
Q 328.80>309.05 (-) 1.62e5



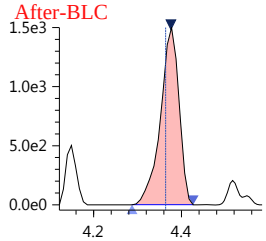
4_2-FTS_1
Conc 0.0007
RT 4.161 Area 76
R#1 83500.00 (0.00)
Q 327.00>307.05 (-) 3.60e1
After-MP



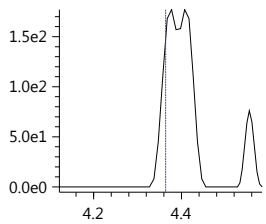
R1 327.00>81.10 (-) 3.77e4



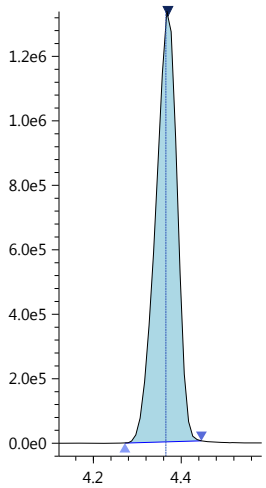
PFHpA
Conc 0.0140
RT 4.376 Area 4398
R#1 6.86 (0.00)
Q 362.90>319.00 (-) 1.50e3
After-BLC



R1 362.90>169.00 (-) 1.77e2



PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 4587767
ISTD 366.90>322.10 (-) 1.34e6



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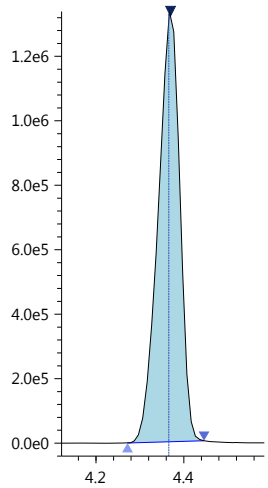
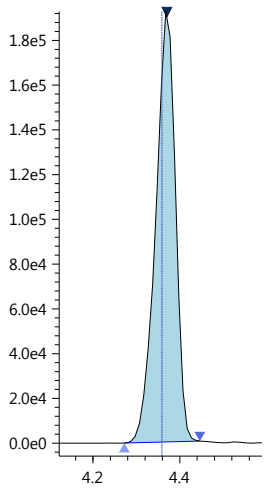
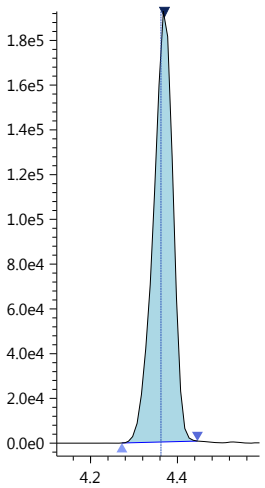
PFHpA-13C
Conc 4.8986
RT 4.370 Area 4587767
Q 366.90>322.10 (-) 1.34e6



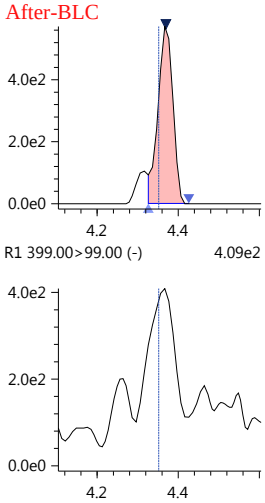
PFHxS-18O_IS
Conc 5.0000
RT 4.370 Area 610903
ISTD 402.70>84.05 (-) 1.93e5



PFHxS-18O
Conc 5.3850
RT 4.370 Area 610903
Q 402.70>84.05 (-) 1.93e5

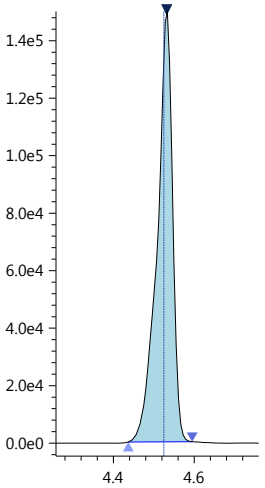


PFHxS_1
Conc 0.0121
RT 4.370 Area 1467
R#1 38.66 (0.00)
Q 399.00>80.00 (-) 5.72e2
After-BLC

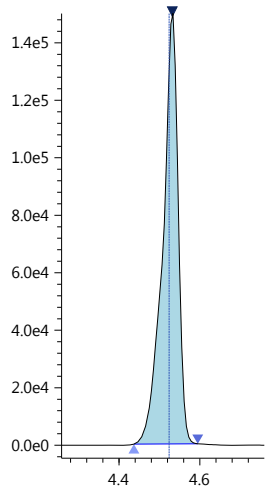


R1 399.00>99.00 (-) 4.09e2

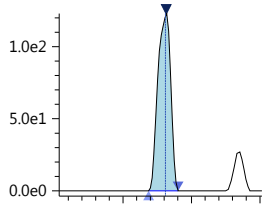
6_2-FTS-13C
Conc 4.9088
RT 4.532 Area 394490
Q 428.90>409.00 (-) 1.50e5



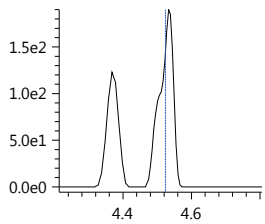
6_2-FTS-13C_IS
Conc 5.0000
RT 4.532 Area 394490
ISTD 428.90>409.00 (-) 1.50e5



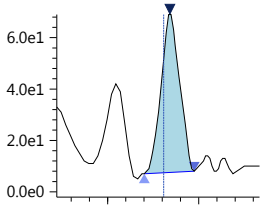
6_2-FTS_1
Conc 0.0041
RT 4.526 Area 322
R#1 107.44 (0.00)
Q 427.00>407.00 (-) 1.23e2



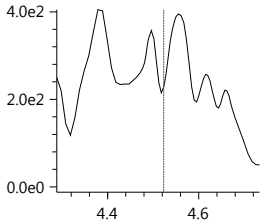
R1 427.00>80.90 (-) 1.90e2



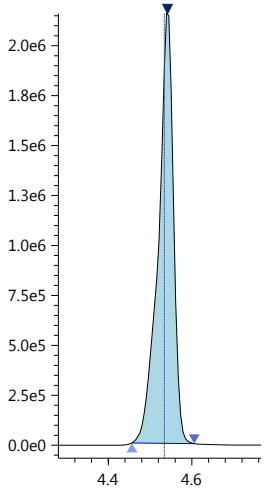
PFHpS_1
Conc 0.0012
RT 4.537 Area 175
R#1 130.30 (0.00)
Q 449.00>80.15 (-) 6.90e1



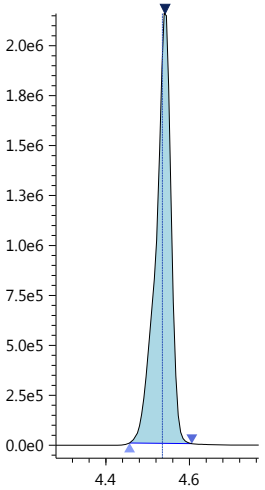
R1 449.00>99.20 (-) 4.05e2



PFOA-13C_IS
Conc 5.0000
RT 4.542 Area 5434454
ISTD 416.80>372.05 (-) 2.16e6



PFOA-13C
Conc 5.0930
RT 4.542 Area 5434454
Q 416.80>372.05 (-) 2.16e6



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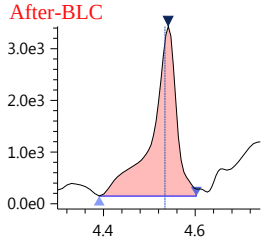
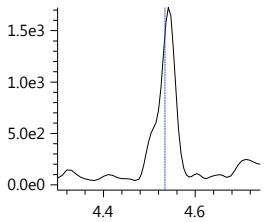
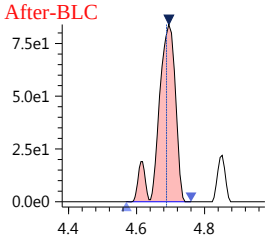
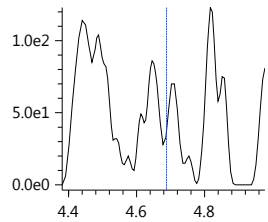
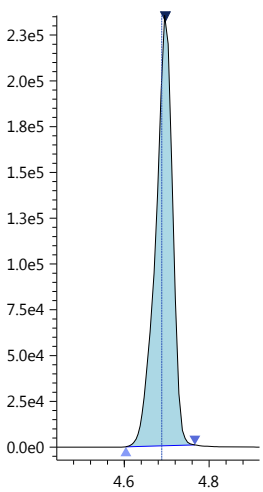
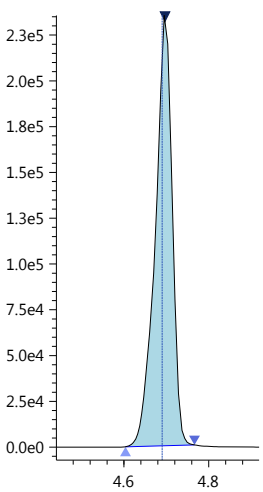
PFOA
Conc 0.0088
RT 4.541 Area 11970
R#1 51.23 (0.00)
Q 413.00>369.00 (-) 3.43e3


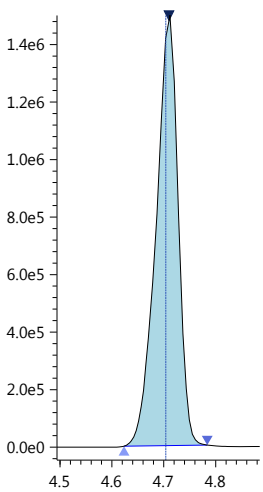
R1 413.00>169.10 (-) 1.73e3


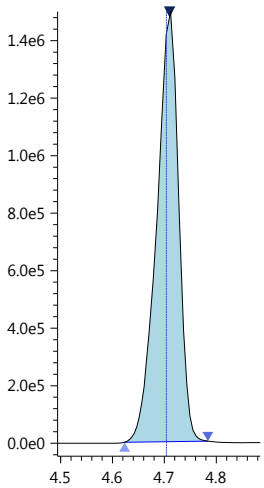
PFOS_1
Conc 0.0031
RT 4.695 Area 291
R#1 40.96 (0.00)
Q 499.00>80.00 (-) 8.40e1


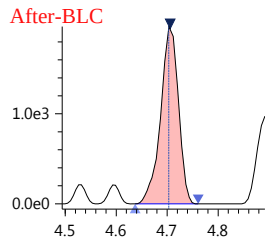
R1 499.00>99.00 (-) 1.23e2


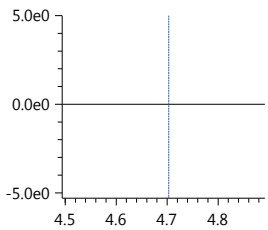
PFOS-13C_IS
Conc 5.0000
RT 4.697 Area 650998
ISTD 502.80>80.05 (-) 2.36e5


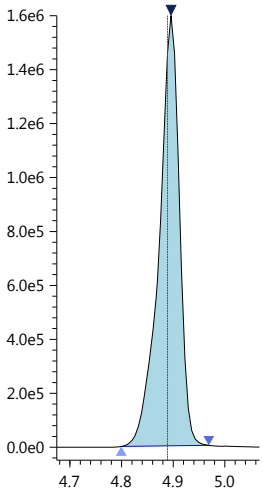
PFOS-13C
Conc 5.0896
RT 4.697 Area 650998
Q 502.80>80.05 (-) 2.36e5


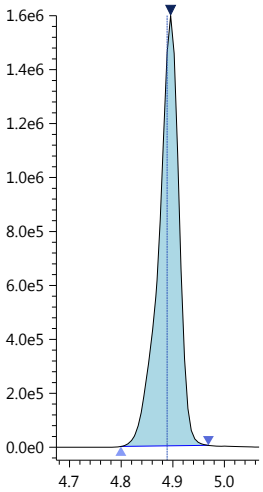
PFNA-13C_IS
Conc 5.0000
RT 4.710 Area 4409684
ISTD 467.80>423.00 (-) 1.50e6


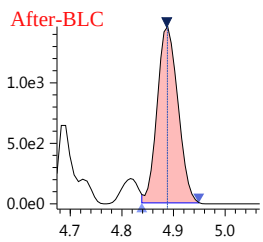
PFNA-13C
Conc 4.7915
RT 4.710 Area 4409684
Q 467.80>423.00 (-) 1.50e6


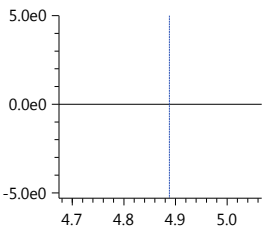
PFNA
Conc 0.0127
RT 4.706 Area 4784
R#1 0.00 (0.00)
Q 463.00>418.90 (-) 1.97e3


R1 463.00>219.00 (-) 0.00e0


PFDA-13C_IS
Conc 5.0000
RT 4.896 Area 4353598
ISTD 514.80>469.95 (-) 1.60e6


PFDA-13C
Conc 5.1058
RT 4.896 Area 4353598
Q 514.80>469.95 (-) 1.60e6


PFDA
Conc 0.0055
RT 4.887 Area 4074
R#1 0.00 (0.00)
Q 513.00>468.80 (-) 1.47e3


R1 513.00>219.10 (-) 0.00e0


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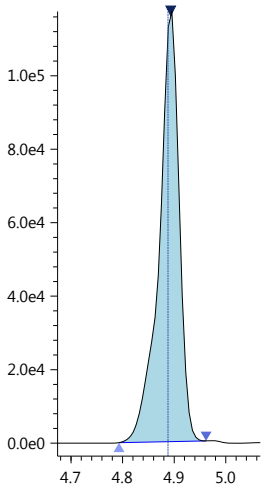
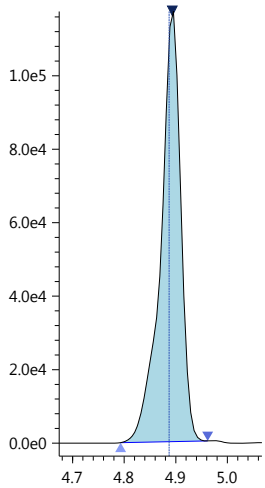
8_2-FTS-13C_IS
Conc 5.0000
RT 4.893 Area 316250
ISTD 528.80>509.00 (-) 1.17e5

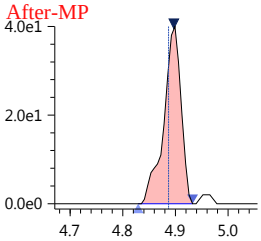


8_2-FTS-13C
Conc 4.9915
RT 4.893 Area 316250
Q 528.80>509.00 (-) 1.17e5

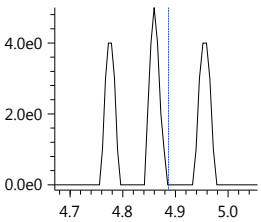


8_2-FTS_1
Conc 0.0018
RT 4.897 Area 91
R#1 0.00 (0.00)
Q 527.10>506.90 (-) 4.00e1

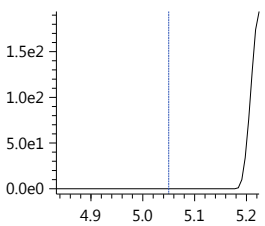
After-MP



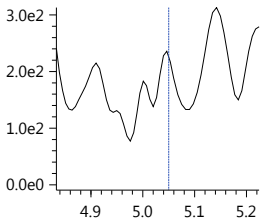
R1 527.20>487.00 (-) 5.00e0



PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 599.00>79.90 (-) 1.94e2

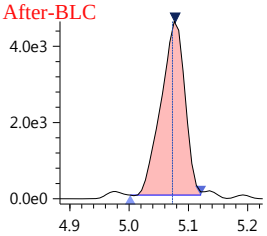


R1 599.00>99.10 (-) 3.13e2

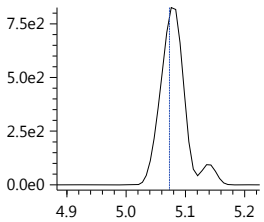


PFUnA
Conc 0.0133
RT 5.078 Area 12786
R#1 17.88 (0.00)
Q 563.00>518.90 (-) 4.65e3

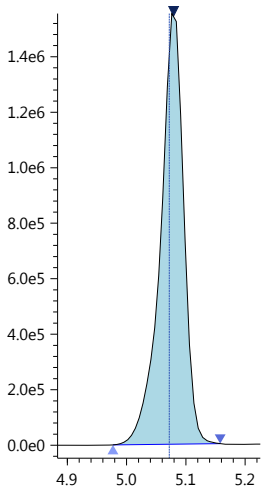
After-BLC



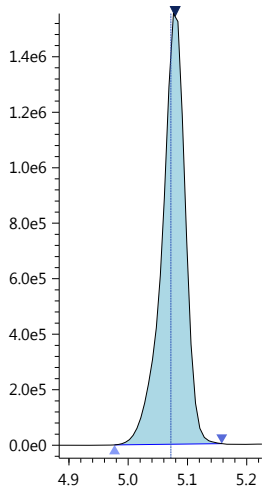
R1 563.00>219.00 (-) 8.26e2



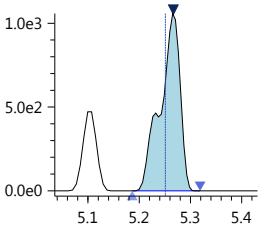
PFUnA-13C_IS
Conc 5.0000
RT 5.079 Area 4250015
ISTD 564.80>519.95 (-) 1.56e6



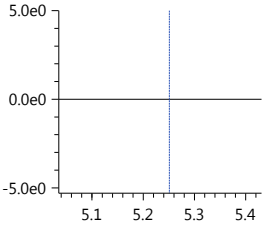
PFUnA-13C
Conc 5.1245
RT 5.079 Area 4250015
Q 564.80>519.95 (-) 1.56e6



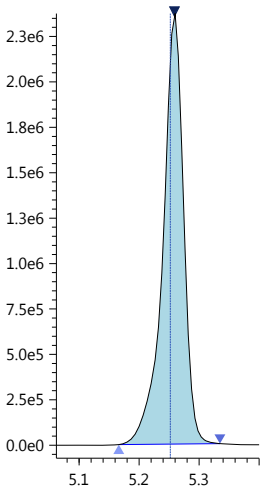
PFDoA
Conc 0.0074
RT 5.267 Area 2857
R#1 0.00 (0.00)
Q 613.05>569.00 (-) 1.06e3



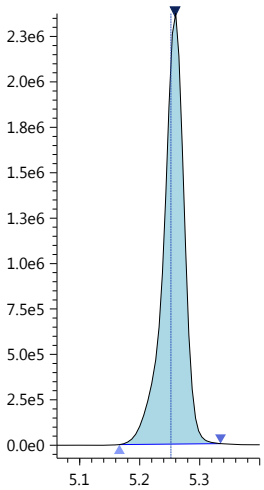
R1 613.05>169.00 (-) 0.00e0



PFDoA-13C
Conc 5.0012
RT 5.259 Area 5669403
Q 614.80>569.95 (-) 2.38e6



PFDoA-13C_IS
Conc 5.0000
RT 5.259 Area 5669403
ISTD 614.80>569.95 (-) 2.38e6



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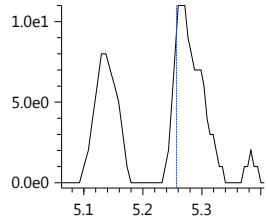
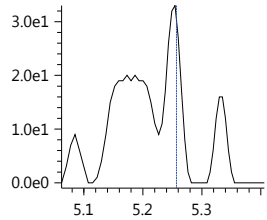
10_2-FtS_1

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

Q 627.00>606.95 (-) 1.10e1



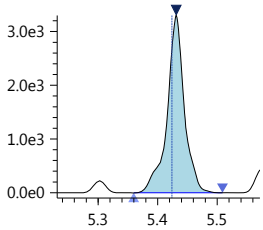
R1 627.00>81.25 (-) 3.30e1



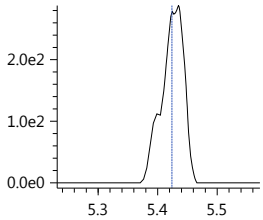
PFTrDA

Conc 0.0118
RT 5.431 Area 6620
R#1 0.62 (0.00)

Q 663.00>618.90 (-) 3.30e3



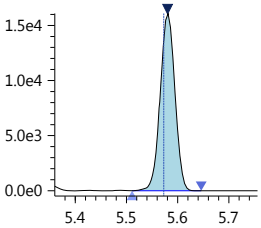
R1 662.90>169.00 (-) 2.88e2



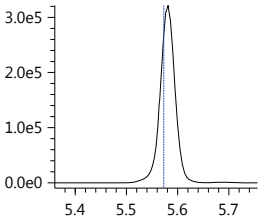
PFTeDA

Conc 0.0096
RT 5.580 Area 32106
R#1 2019.76 (0.00)

Q 713.40>669.00 (-) 1.61e4



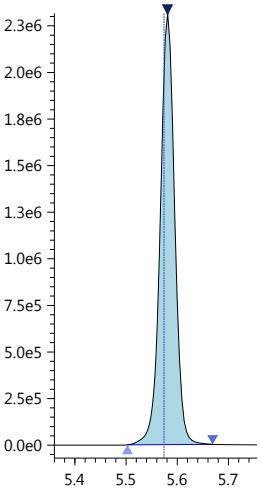
R1 713.40>169.10 (-) 3.21e5



PFTeDA-13C

Conc 5.0880
RT 5.581 Area 4543349

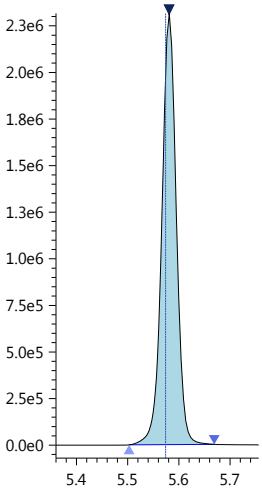
Q 714.70>669.90 (-) 2.32e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.581 Area 4543349

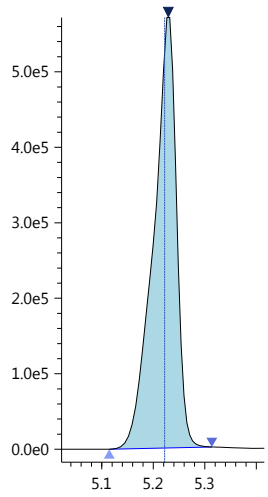
ISTD 714.70>669.90 (-) 2.32e6



FOSA-13C_IS

Conc 5.0000
RT 5.229 Area 1765788

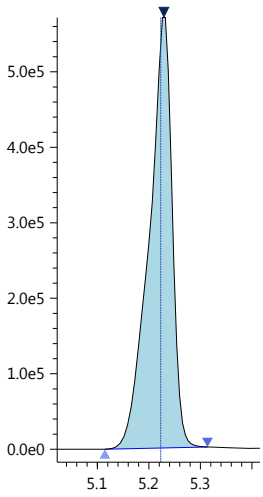
ISTD 506.00>78.05 (-) 5.72e5



FOSA-13C

Conc 4.9768
RT 5.229 Area 1765788

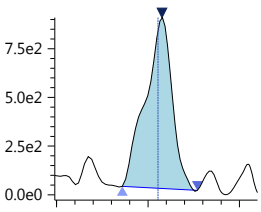
Q 506.00>78.05 (-) 5.72e5



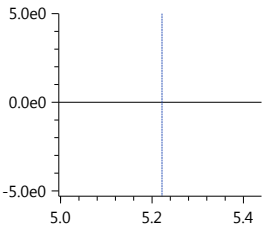
FOSA

Conc 0.0075
RT 5.230 Area 3544
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 9.10e2



R1 498.20>64.10 (-) 0.00e0

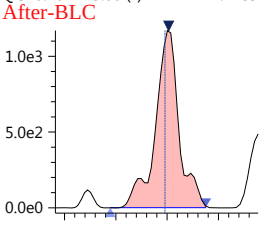


N-MeFOSAA

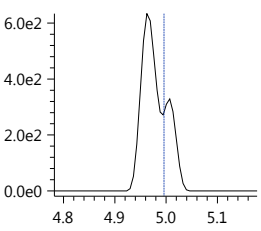
Conc 0.0319
RT 5.003 Area 3742
R#1 29.18 (0.00)

Q 570.20>419.00 (-) 1.17e3

After-BLC



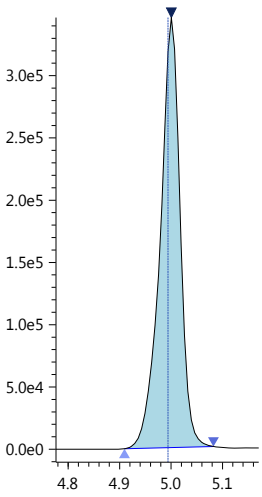
R1 570.20>512.00 (-) 6.34e2



N-MeFOSAA-d3

Conc 4.9277
RT 5.001 Area 931501

Q 572.80>419.05 (-) 3.47e5



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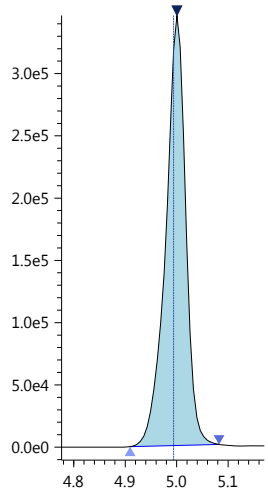
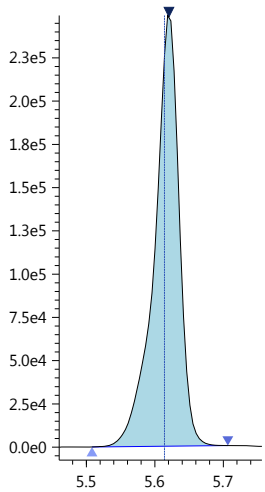
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.001 Area 931501

ISTD 572.80>419.05 (-) 3.47e5



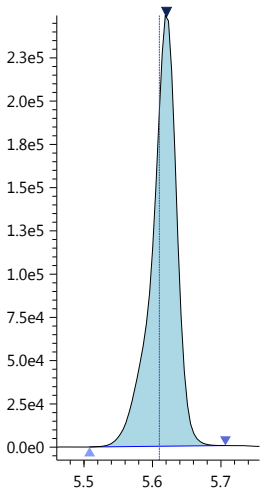
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.621 Area 625522

ISTD 514.90>168.90 (-) 2.49e5



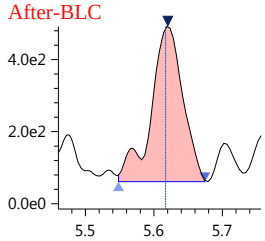
N-MeFOSA-d3
Conc 4.9943
RT 5.621 Area 625522

Q 514.90>168.90 (-) 2.49e5

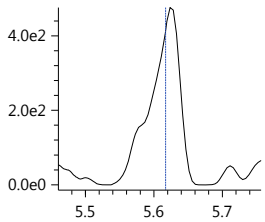


N-MeFOSA
Conc 0.0087
RT 5.620 Area 1391
R#1 99.11 (0.00)

Q 512.00>169.10 (-) 4.92e2

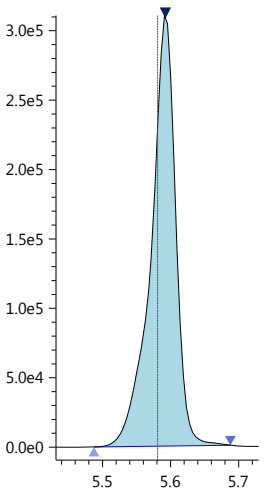


R1 512.00>219.00 (-) 4.76e2



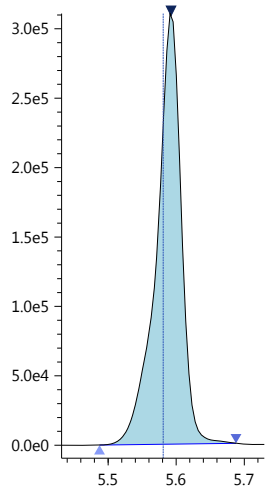
N-MeFOSE-d7
Conc 5.1554
RT 5.592 Area 781225

Q 622.70>59.10 (-) 3.11e5



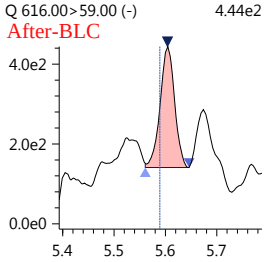
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 781225

ISTD 622.70>59.10 (-) 3.11e5

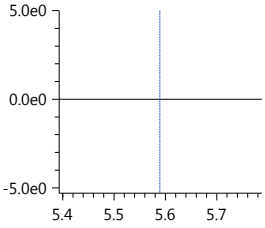


N-MeFOSE
Conc 0.0028
RT 5.604 Area 593
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 4.44e2

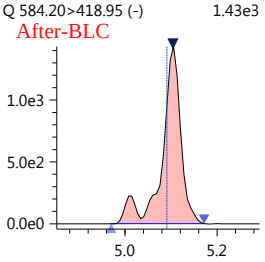


R1 556.00>121.20 (-) 0.00e0

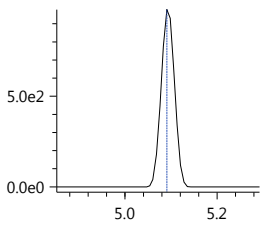


N-EtFOSAA
Conc 0.0568
RT 5.104 Area 4030
R#1 45.59 (0.00)

Q 584.20>418.95 (-) 1.43e3

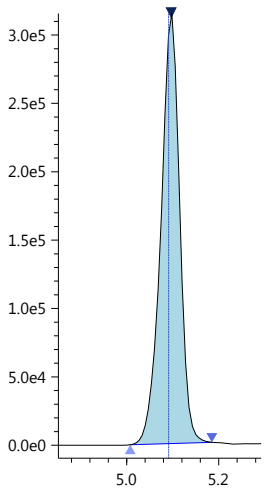


R1 584.20>526.10 (-) 9.78e2



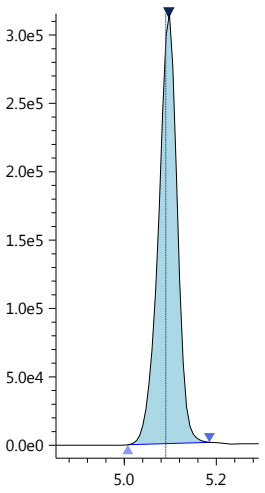
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.097 Area 892849

ISTD 588.80>419.00 (-) 3.16e5



N-EtFOSAA-d5
Conc 4.9206
RT 5.097 Area 892849

Q 588.80>419.00 (-) 3.16e5



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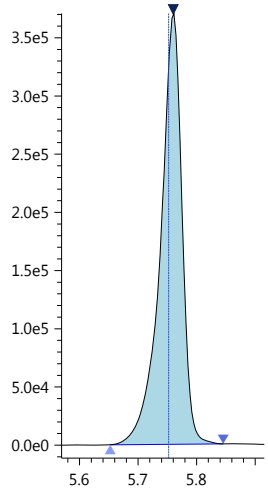
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.760 Area 945359

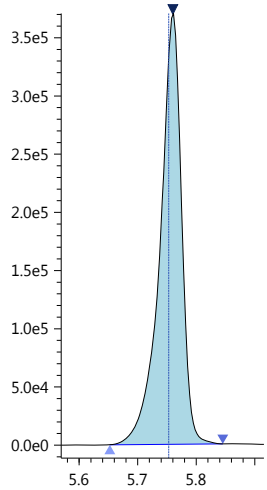
ISTD 530.90>169.15 (-) 3.71e5



N-EtFOSA-d9

Conc 4.8340
RT 5.760 Area 945359

Q 530.90>169.15 (-) 3.71e5

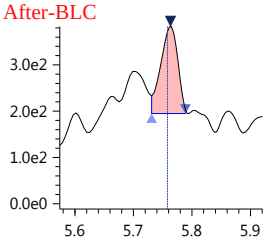


N-EtFOSA

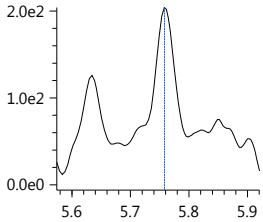
Conc 0.0126
RT 5.763 Area 381
R#1 64.73 (0.00)

Q 526.90>169.10 (-) 3.83e2

After-BLC



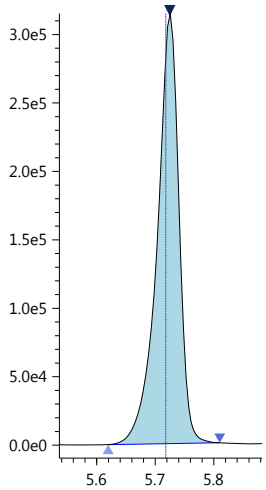
R1 526.90>219.00 (-) 2.04e2



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.725 Area 811771

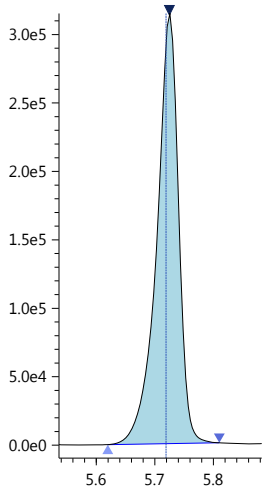
ISTD 638.70>59.10 (-) 3.15e5



N-EtFOSE-d9

Conc 4.8596
RT 5.725 Area 811771

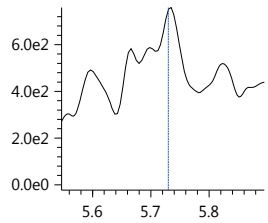
Q 638.70>59.10 (-) 3.15e5



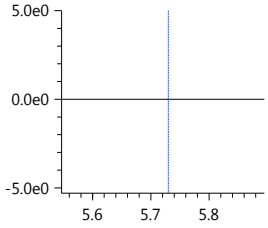
N-EtFOSE

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

Q 630.00>58.90 (-) 7.59e2



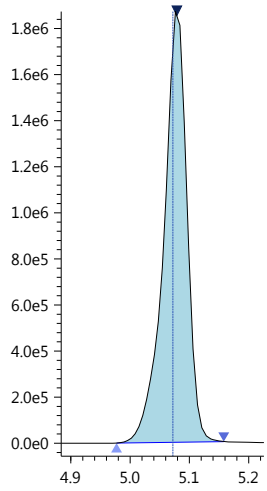
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.079 Area 5098432

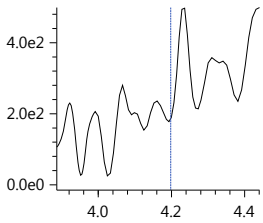
ISTD 570.00>525.00 (-) 1.87e6



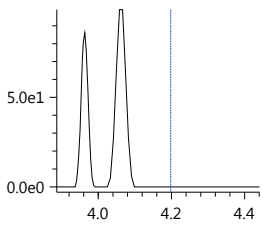
PFPeS

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

Q 349.00>99.00 (-) 4.99e2



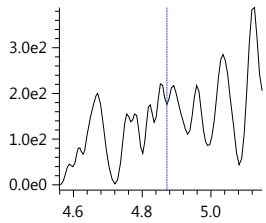
R1 349.00>79.95 (-) 9.90e1



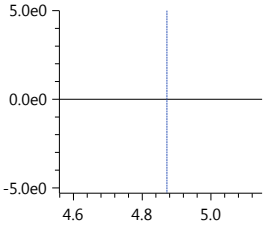
PFNS

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

Q 549.00>99.00 (-) 3.88e2



R1 549.00>79.95 (-) 0.00e0



Insight Report

Printed at 1/21/2019 9:31:25 AM

190118_030

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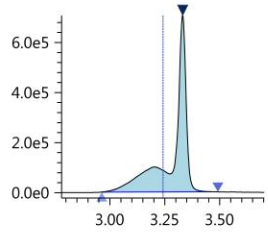
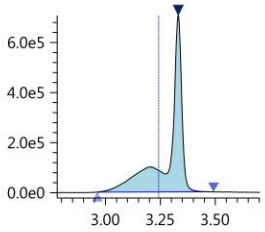
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_030.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

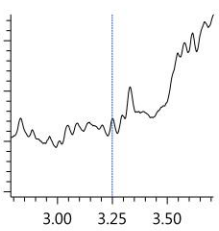
PFBA-13C_IS
Conc 5.0000
RT 3.331 Area 2712774
ISTD 216.90>172.15 (-) 7.08e5



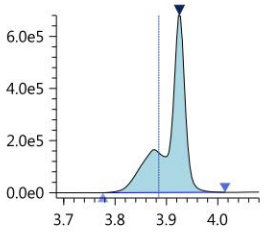
PFBA-13C
Conc 4.9294
RT 3.331 Area 2712774
Q 216.90>172.15 (-) 7.08e5



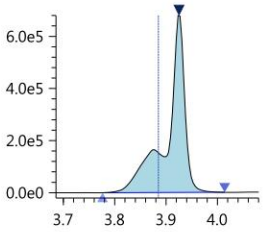
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.76e3



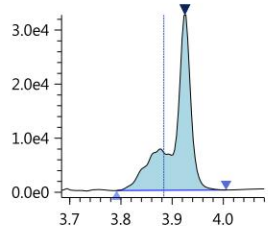
PFPeA-13C_IS
Conc 5.0000
RT 3.925 Area 1636029
ISTD 267.90>223.00 (-) 6.80e5



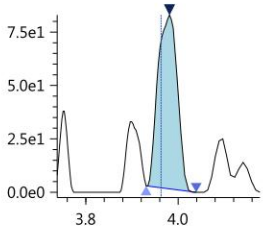
PFPeA-13C
Conc 4.8825
RT 3.925 Area 1636029
Q 267.90>223.00 (-) 6.80e5



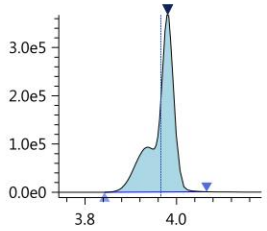
PFPeA
Conc 0.0210
RT 3.925 Area 78963
Q 263.05>219.10 (-) 3.28e4



PFBS_1
Conc 0.0003
RT 3.981 Area 238
Q 299.00>80.00 (-) 8.30e1



PFBS-13C
Conc 4.9643
RT 3.981 Area 994892
Q 301.80>80.00 (-) 3.67e5



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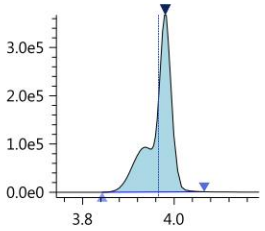
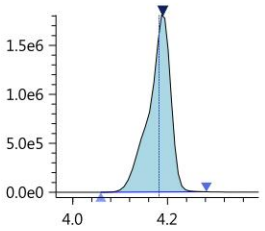
RT 3.981 Area 994892
ISTD 301.80>80.00 (-) 3.67e5



PFHxA-13C_IS
Conc 5.0000
RT 4.190 Area 5739939
ISTD 314.90>270.10 (-) 1.81e6



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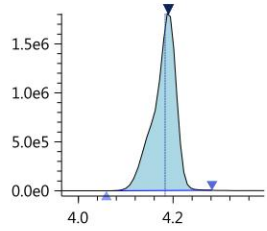
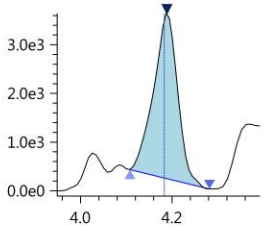
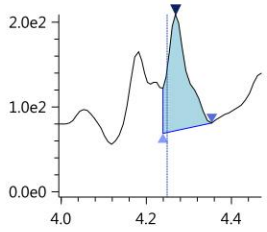
Conc 5.0347
RT 4.190 Area 5739939
Q 314.90>270.10 (-) 1.81e6



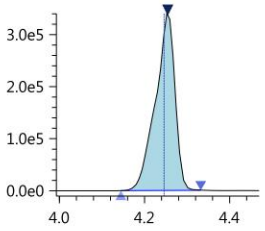
PFHxA
Conc 0.0026
RT 4.189 Area 12360
Q 313.00>269.00 (-) 3.64e3



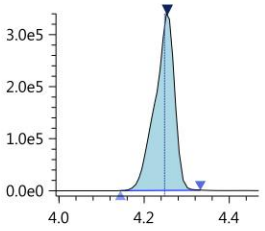
HPFO_DA
Conc 0.0004
RT 4.269 Area 436
Q 329.00>169.00 (-) 2.09e2



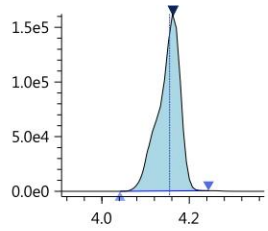
HFPO_DA-13C_IS
Conc 5.0000
RT 4.254 Area 1085067
ISTD 332.00>286.80 (-) 3.41e5



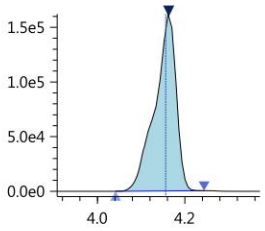
HFPO_DA-13C
Conc 5.0720
RT 4.254 Area 1085067
Q 332.00>286.80 (-) 3.41e5



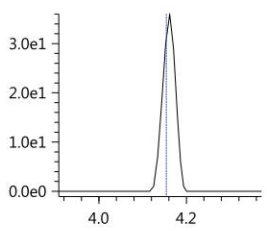
4_2-FTS-13C_IS
Conc 5.0000
RT 4.163 Area 541260
ISTD 328.80>309.05 (-) 1.62e5



4_2-FTS-13C
Conc 4.7381
RT 4.163 Area 541260
Q 328.80>309.05 (-) 1.62e5



4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 3.60e1



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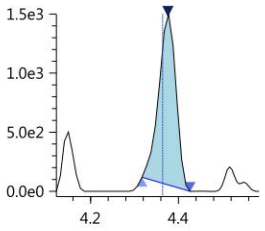
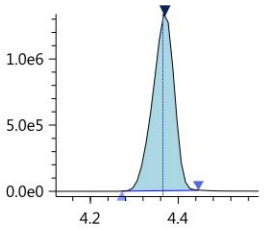
Conc 0.0010
RT 4.376 Area 3947
Q 362.90>319.00 (-) 1.50e3



PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 4587767
ISTD 366.90>322.10 (-) 1.34e6



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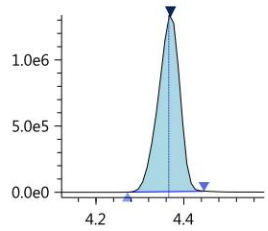
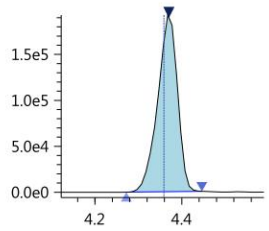
PFHpA-13C
Conc 4.8986
RT 4.370 Area 4587767
Q 366.90>322.10 (-) 1.34e6



PFHxS-18O_IS
Conc 5.0000
RT 4.370 Area 610903
ISTD 402.70>84.05 (-) 1.93e5



PFHxS-18O
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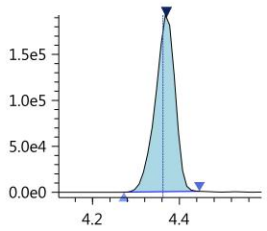
RT 4.370 Area 610903
Q 402.70>84.05 (-) 1.93e5



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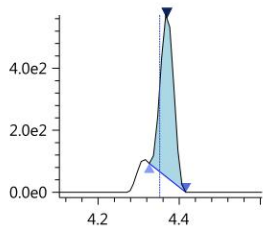
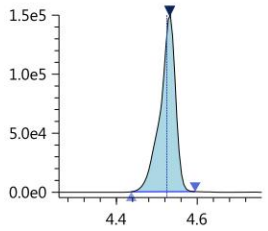
Conc 0.0022
RT 4.370 Area 1222
Q 399.00>80.00 (-) 5.72e2



6_2-FTS-13C
Conc 4.9088
RT 4.532 Area 394490
Q 428.90>409.00 (-) 1.50e5



6_2-FTS-13C_IS
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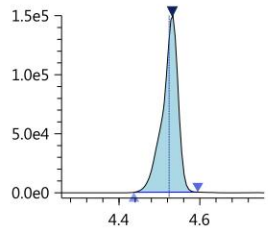
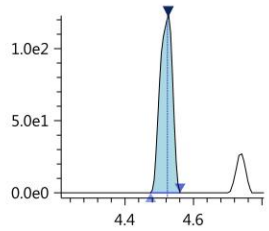
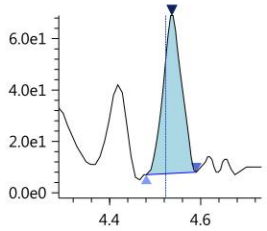
ISTD 428.90>409.00 (-) 1.50e5



6_2-FTS_1
Conc 0.0010
RT 4.526 Area 322
Q 427.00>407.00 (-) 1.23e2



PFHpS_1
Conc 0.0003
RT 4.537 Area 175
Q 449.00>80.15 (-) 6.90e1



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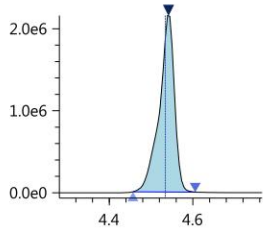
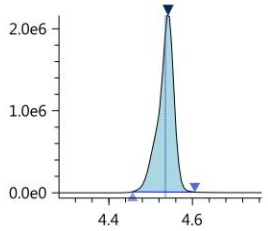
Conc 5.0000
RT 4.542 Area 5434454
ISTD 416.80>372.05 (-) 2.16e6



PFOA-13C
Conc 5.0930
RT 4.542 Area 5434454
Q 416.80>372.05 (-) 2.16e6



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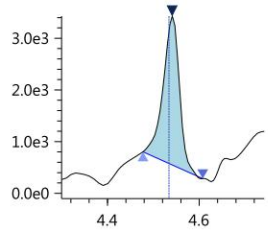
Conc 0.0017
RT 4.541 Area 7097
Q 413.00>369.00 (-) 3.43e3



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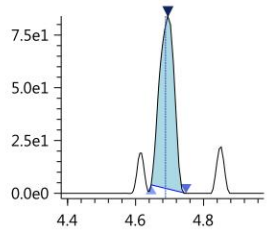
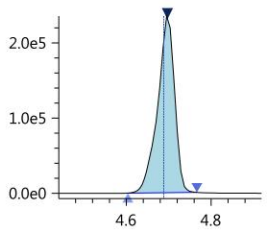
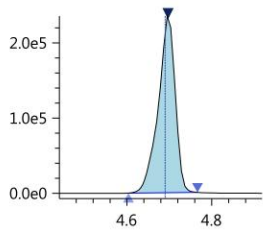
Conc 0.0006
RT 4.695 Area 250
Q 499.00>80.00 (-) 8.40e1



PFOS-13C_IS
Conc 5.0000
RT 4.697 Area 650998
ISTD 502.80>80.05 (-) 2.36e5



PFOS-13C
Conc 5.0896
RT 4.697 Area 650998
Q 502.80>80.05 (-) 2.36e5



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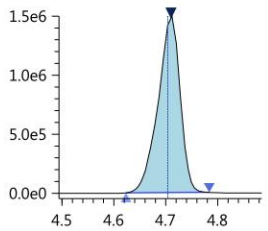
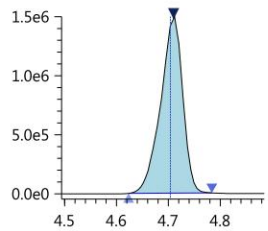
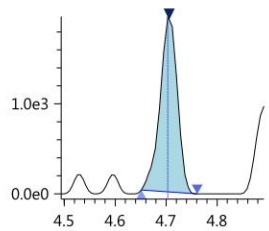
Conc 5.0000
RT 4.710 Area 4409684
ISTD 467.80>423.00 (-) 1.50e6



PFNA-13C
Conc 4.7915
RT 4.710 Area 4409684
Q 467.80>423.00 (-) 1.50e6



PFNA
Conc 0.0016
RT 4.706 Area 4636
Q 463.00>418.90 (-) 1.97e3



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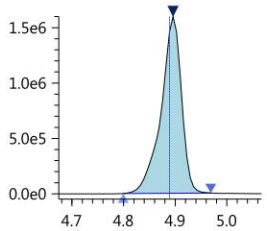
RT 4.896 Area 4353598
ISTD 514.80>469.95 (-) 1.60e6



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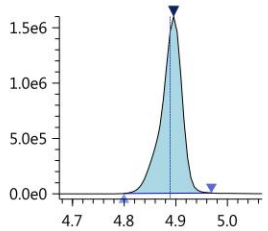
Q 514.80>469.95 (-) 1.60e6



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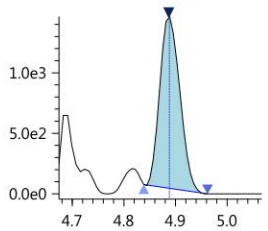
RT 4.887 Area 3842
Q 513.00>468.80 (-) 1.47e3



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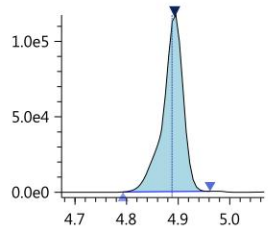
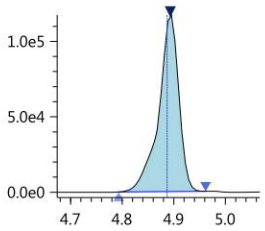
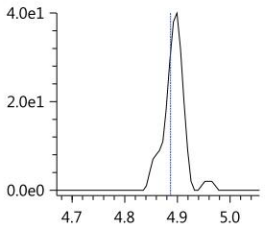
8_2-FTS-13C_IS
Conc 5.0000
RT 4.893 Area 316250
ISTD 528.80>509.00 (-) 1.17e5



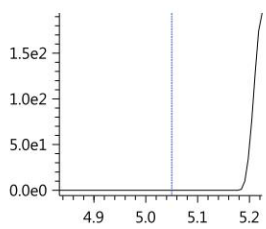
8_2-FTS-13C
Conc 4.9915
RT 4.893 Area 316250
Q 528.80>509.00 (-) 1.17e5



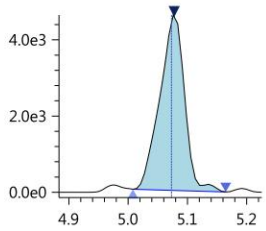
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 4.00e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 1.94e2



PFUnA
Conc 0.0043
RT 5.078 Area 13366
Q 563.00>518.90 (-) 4.65e3



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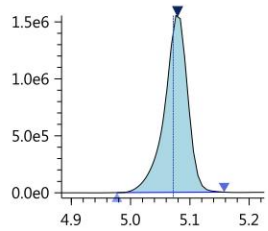
Conc 5.0000
RT 5.079 Area 4250015
ISTD 564.80>519.95 (-) 1.56e6



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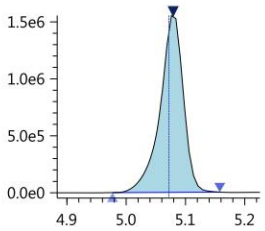
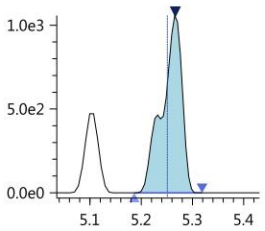
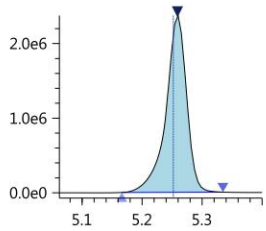
RT 5.079 Area 4250015
Q 564.80>519.95 (-) 1.56e6



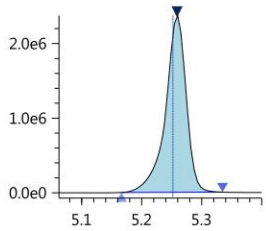
PFDoA
Conc 0.0010
RT 5.267 Area 2857
Q 613.05>569.00 (-) 1.06e3



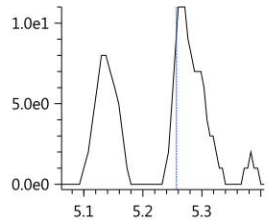
PFDoA-13C
Conc 5.0012
RT 5.259 Area 5669403
Q 614.80>569.95 (-) 2.38e6



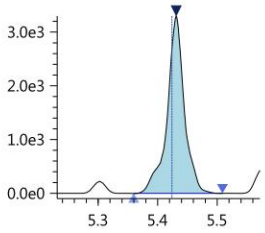
PFDoA-13C_IS
Conc 5.0000
RT 5.259 Area 5669403
ISTD 614.80>569.95 (-) 2.38e6



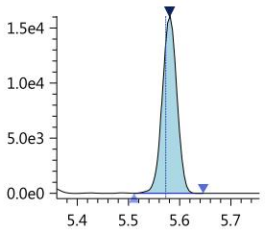
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.10e1



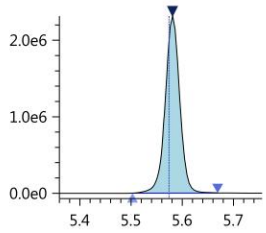
PFTrDA
Conc 0.0018
RT 5.431 Area 6620
Q 663.00>618.90 (-) 3.30e3



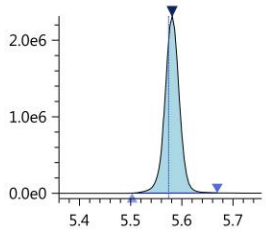
PFTeDA
Conc 0.0225
RT 5.580 Area 32106
Q 713.40>669.00 (-) 1.61e4



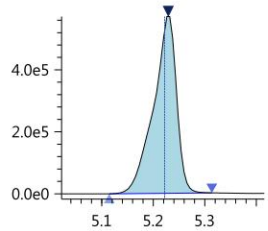
PFTeDA-13C
Conc 5.0880
RT 5.581 Area 4543349
Q 714.70>669.90 (-) 2.32e6



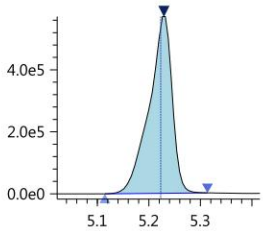
PFTeDA-13C_IS
Conc 5.0000
RT 5.581 Area 4543349
ISTD 714.70>669.90 (-) 2.32e6



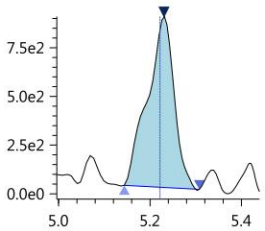
FOSA-13C_IS
Conc 5.0000
RT 5.229 Area 1765788
ISTD 506.00>78.05 (-) 5.72e5



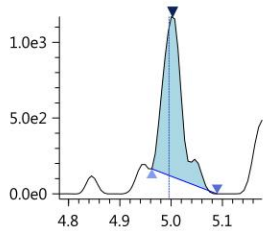
FOSA-13C
Conc 4.9768
RT 5.229 Area 1765788
Q 506.00>78.05 (-) 5.72e5



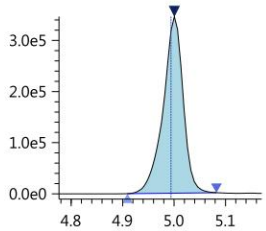
FOSA
Conc 0.0016
RT 5.230 Area 3544
Q 498.20>78.00 (-) 9.10e2



N-MeFOSAA
Conc 0.0054
RT 5.003 Area 2754
Q 570.20>419.00 (-) 1.17e3



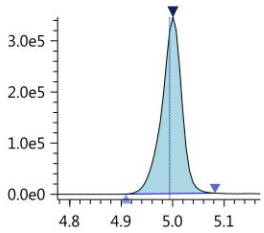
N-MeFOSAA-d3
Conc 4.9277
RT 5.001 Area 931501
Q 572.80>419.05 (-) 3.47e5



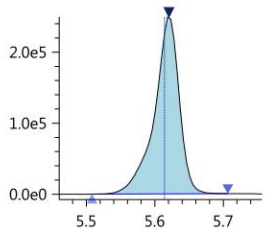
Insight Report

Printed at 1/21/2019 9:31:25 AM

N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.001 Area 931501
ISTD 572.80>419.05 (-) 3.47e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.621 Area 625522
ISTD 514.90>168.90 (-) 2.49e5



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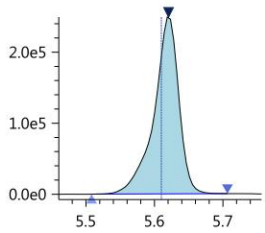

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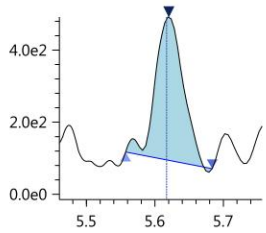
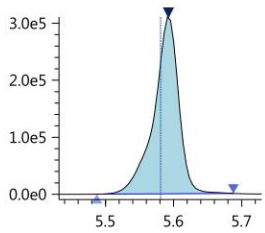
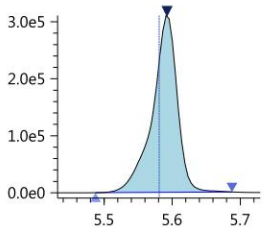
Conc 0.0015
RT 5.620 Area 1124
Q 512.00>169.10 (-) 4.92e2



N-MeFOSE-d7
Conc 5.1554
RT 5.592 Area 781225
Q 622.70>59.10 (-) 3.11e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.592 Area 781225
ISTD 622.70>59.10 (-) 3.11e5



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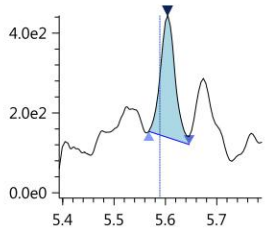
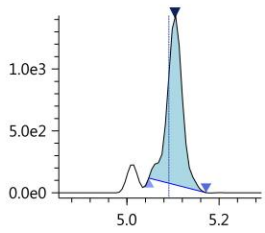
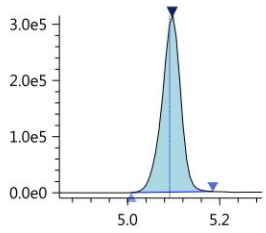
Conc 0.0006
RT 5.604 Area 606
Q 616.00>59.00 (-) 4.44e2



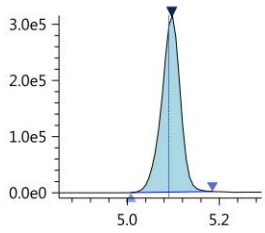
N-EtFOSAA
Conc 0.0076
RT 5.104 Area 3163
Q 584.20>418.95 (-) 1.43e3



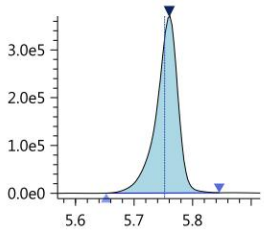
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.097 Area 892849
ISTD 588.80>419.00 (-) 3.16e5



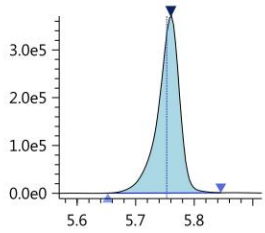
N-EtFOSAA-d5
Conc 4.9206
RT 5.097 Area 892849
Q 588.80>419.00 (-) 3.16e5



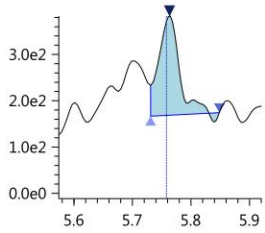
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.760 Area 945359
ISTD 530.90>169.15 (-) 3.71e5



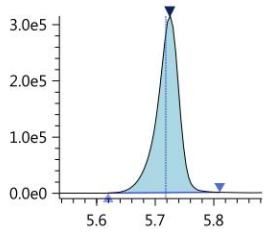
N-EtFOSA-d9
Conc 4.8340
RT 5.760 Area 945359
Q 530.90>169.15 (-) 3.71e5



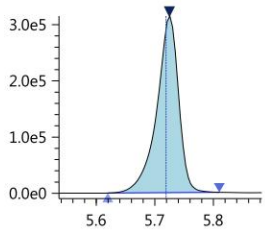
N-EtFOSA
Conc 0.0037
RT 5.763 Area 517
Q 526.90>169.10 (-) 3.83e2



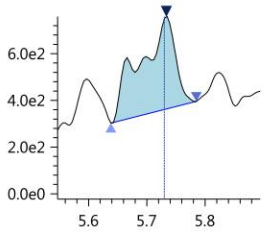
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.725 Area 811771
ISTD 638.70>59.10 (-) 3.15e5



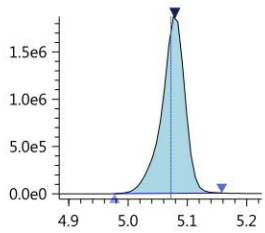
N-EtFOSE-d9
Conc 4.8596
RT 5.725 Area 811771
Q 638.70>59.10 (-) 3.15e5



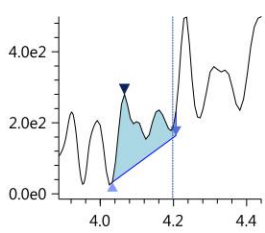
N-EtFOSE
Conc 0.0022
RT 5.733 Area 1670
Q 630.00>58.90 (-) 7.59e2



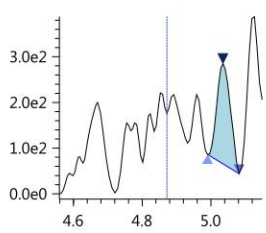
13C7-PFUnDA_IS
Conc 5.0000
RT 5.079 Area 5098432
ISTD 570.00>525.00 (-) 1.87e6



PFPeS
Conc 0.0025
RT 4.066 Area 1025
Q 349.00>99.00 (-) 4.99e2



PFNS
Conc 0.0017
RT 5.035 Area 597
Q 549.00>99.00 (-) 3.88e2



1st CM 01/21/19
2nd 01/23/19

Validation Report

Data File: J:\LCMS06\Data\190118_b1\190118_031
Lab ID: KQ1900761-03
RunType: CCV
Matrix: Water

Date Acquired: 1/18/19 19:10
Batch ID: 622537
Analysis Method: PFC/537M/PFOA

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

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Secondary Review: _____

1st CM 01/21/19
2nd 01/23/19

Quantitation Report

Data File:	J:\LCMS06\Data\190118_b1\190118_031	**Instrument:**	K-LCMS-06
Acqu Date:	1/18/19 19:10	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900761-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	1/10/19	**Receive Date:**	1/15/19

Analysis Lot:	622537	**Prep Lot:**		**Report Group:**	KQ1900761
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900021
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.073		5137317	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	3.974		1009175	4.9974	Y
18O2-PFHxS	4.362		525106	4.5937	Y
13C4-PFOS	4.691		638099	4.9510	Y
13C4-PFBA	3.323		2771499	4.9980	Y
13C5-PFPeA	3.918		1689488	5.0039	Y
13C2-PFHxA	4.183		5846492	5.0893	Y
13C4-PFHpA	4.366		4769670	5.0543	Y
13C4-PFOA	4.536		5574780	5.1850	Y
13C5-PFNA	4.706		4916750	5.3020	Y
13C2-PFDA	4.891		4536927	5.2805	Y
13C2-PFUnDA	5.074		4152592	4.9692	Y
13C2-PFDoDA	5.254		5764848	5.0469	Y
13C2-PFTeDA	5.576		4624183	5.1394	Y
13C8-FOSA	5.224		1852618	5.1820	Y
D3-MeFOSA	5.616		648476	5.1384	Y
D5-EtFOSA	5.754		987047	5.0090	Y
D7-MeFOSE	5.588		792164	5.1880	Y
D9-EtFOSE	5.720		822297	4.8853	Y
D3-MeFOSAA	4.996		994624	5.2218	Y
D5-EtFOSAA	5.092		956838	5.2333	Y
13C2-4:2 FTS	4.155		573434	4.9817	Y
13C2-6:2 FTS	4.526		415919	5.1362	Y
13C2-8:2 FTS	4.889		312255	4.8911	Y
13C3-HFPO-DA	4.248		1064275	4.9371	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: 1/21/19 15:11
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1st CM 01/21/19
2nd 01/23/19

Data File:	J:\LCMS06\Data\190118_b1\190118_031	**Instrument:**	K-LCMS-06
Acqu Date:	1/18/19 19:10	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1900761-03	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.972		187112	0.9216	Y
Perfluoropentane sulfonic acid (PFPeS)	4.197		84966	0.9012	Y
Perfluorohexane sulfonic acid (PFHxS)	4.356		105707	1.0131	Y
Perfluoroheptane sulfonic acid (PFHpS)	4.527		133662	1.0637	Y
Perfluorooctane sulfonic acid (PFOS)	4.691		79084	0.8656	Y
Perfluorononane sulfonic acid (PFNS)	4.872		71684	0.9424	Y
Perfluorodecane sulfonic acid (PFDS)	5.050		108494	0.9854	Y
Perfluorobutanoic acid (PFBA)	3.326		502523	0.9117	Y
Perfluoropentanoic acid (PFPeA)	3.919		845891	0.9118	Y
Perfluorohexanoic acid (PFHxA)	4.183		1004850	0.9293	Y
Perfluoroheptanoic acid (PFHpA)	4.366		822736	0.9271	Y
Perfluorooctanoic acid (PFOA)	4.536		871926	0.9195	Y
Perfluorononanoic acid (PFNA)	4.705		692058	0.9996	Y
Perfluorodecanoic acid (PFDA)	4.891		725314	0.9461	Y
Perfluoroundecanoic acid (PFUnDA)	5.074		627247	0.9293	Y
Perfluorododecanoic acid (PFDoDA)	5.254		605650	0.9733	Y
Perfluorotridecanoic acid (PFTrDA)	5.425		752889	0.9405	Y
Perfluorotetradecanoic acid (PFTeDA)	5.577		333149	0.9654	Y
Perfluorooctane sulfonamide (FOSA)	5.224		470799	0.9490	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.619		164169	0.9903	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	5.760		32460	1.0288	Y
N-Methyl perfluorooctane sulfonamidoethanol	5.596		221031	1.0139	Y
N-Ethyl perfluorooctane sulfonamidoethanol	5.732		172351	1.0199	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.997		129013	1.0303	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.096		113137	1.1583	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.156		106029	0.9586	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.526		79281	0.9635	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.889		53059	1.0701	Y
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	5.260		47177	1.0336	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	4.248		236117	1.0935	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

Insight Report

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190118_031

Sample ID: 1.0 PPB ICV
Date acquired: 1/18/2019 7:10:46 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_031.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.323	2771499	2771499	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.323	2771499	5137317	26	4.9980	ng/mL	5.0000
PFBA	M	3.326	502523	2771499	2	0.9117	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.918	1689488	1689488	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.918	1689488	5137317	26	5.0039	ng/mL	5.0000
PFPeA	Auto	3.919	845891	1689488	4	0.9118	ng/mL	1.0000
PFBS_1	Auto	3.972	187112	1009175	16	0.9216	ng/mL	0.8874
PFBS-13C	Auto	3.974	1009175	5137317	26	4.9974	ng/mL	5.0000
PFBS-13C_IS	Auto	3.974	1009175	1009175	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.183	5846492	5846492	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.183	5846492	5137317	26	5.0893	ng/mL	5.0000
PFHxA	Auto	4.183	1004850	5846492	6	0.9293	ng/mL	1.0000
HPFO_DA	Auto	4.248	236117	1064275	3	1.0935	ng/mL	1.0000
HFPO_DA-13C_IS	Auto	4.248	1064275	1064275	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.248	1064275	5137317	26	4.9371	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.155	573434	573434	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.155	573434	5137317	26	4.9817	ng/mL	5.0000
4_2-FTS_1	Auto	4.156	106029	573434	5	0.9586	ng/mL	0.9372
PFHpA	Auto	4.366	822736	4769670	8	0.9271	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.366	4769670	4769670	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.366	4769670	5137317	26	5.0543	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.362	525106	525106	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.362	525106	5137317	26	4.5937	ng/mL	5.0000
PFHxS_1	Auto	4.356	105707	525106	7	1.0131	ng/mL	0.9131
6_2-FTS-13C	Auto	4.526	415919	5137317	26	5.1362	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.526	415919	415919	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.526	79281	415919	10	0.9635	ng/mL	0.9512
PFHpS_1	Auto	4.527	133662	525106	7	1.0637	ng/mL	0.9534
PFOA-13C_IS	Auto	4.536	5574780	5574780	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.536	5574780	5137317	26	5.1850	ng/mL	5.0000
PFOA	Auto	4.536	871926	5574780	9	0.9195	ng/mL	1.0000
PFOS_1	Auto	4.691	79084	638099	13	0.8656	ng/mL	0.9292
PFOS-13C_IS	Auto	4.691	638099	638099	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.691	638099	5137317	26	4.9510	ng/mL	5.0000
PFNA-13C_IS	Auto	4.706	4916750	4916750	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.706	4916750	5137317	26	5.3020	ng/mL	5.0000
PFNA	Auto	4.705	692058	4916750	11	0.9996	ng/mL	1.0000
PFDA-13C_IS	Auto	4.891	4536927	4536927	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.891	4536927	5137317	26	5.2805	ng/mL	5.0000
PFDA	Auto	4.891	725314	4536927	12	0.9461	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.889	312255	312255	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.889	312255	5137317	26	4.8911	ng/mL	5.0000
8_2-FTS_1	Auto	4.889	53059	312255	15	1.0701	ng/mL	0.9600
PFDS_1	Auto	5.050	108494	638099	13	0.9854	ng/mL	0.9647
PFUnA	Auto	5.074	627247	4152592	14	0.9293	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.074	4152592	4152592	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.074	4152592	5137317	26	4.9692	ng/mL	5.0000
PFDoA	Auto	5.254	605650	5764848	17	0.9733	ng/mL	1.0000
PFDoA-13C	Auto	5.254	5764848	5137317	26	5.0469	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.254	5764848	5764848	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.260	47177	312255	15	1.0336	ng/mL	0.9662
PFTrDA	Auto	5.425	752889	4624183	22	0.9405	ng/mL	1.0000
PFTeDA	Auto	5.577	333149	4624183	22	0.9654	ng/mL	1.0000
PFTeDA-13C	Auto	5.576	4624183	5137317	26	5.1394	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.576	4624183	4624183	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.224	1852618	1852618	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.224	1852618	5137317	26	5.1820	ng/mL	5.0000
FOSA	Auto	5.224	470799	1852618	18	0.9490	ng/mL	1.0000
N-MeFOSAA	Auto	4.997	129013	994624	19	1.0303	ng/mL	1.0000
N-MeFOSAA-d3	Auto	4.996	994624	5137317	26	5.2218	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	4.996	994624	994624	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.616	648476	648476	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.616	648476	5137317	26	5.1384	ng/mL	5.0000
N-MeFOSA	Auto	5.619	164169	648476	1	0.9903	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.588	792164	5137317	26	5.1880	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.588	792164	792164	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.596	221031	792164	20	1.0139	ng/mL	1.0000

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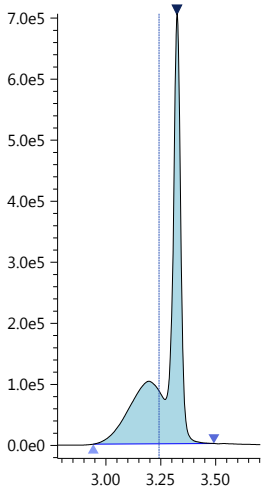
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.096	113137	956838	21	1.1583	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.092	956838	956838	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.092	956838	5137317	26	5.2333	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.754	987047	987047	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.754	987047	5137317	26	5.0090	ng/mL	5.0000
N-EtFOSA	Auto	5.760	32460	987047	23	1.0288	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.720	822297	822297	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.720	822297	5137317	26	4.8853	ng/mL	5.0000
N-EtFOSE	Auto	5.732	172351	822297	24	1.0199	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.073	5137317	5137317	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.197	84966	1009175	16	0.9012	ng/mL	0.9409
PFNS	Auto	4.872	71684	638099	13	0.9424	ng/mL	0.9616

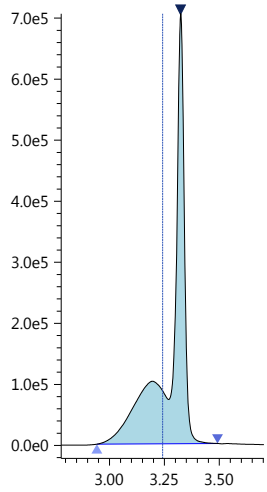
PFBA-13C_IS

Conc 5.0000
RT 3.323 Area 2771499
ISTD 216.90>172.15 (-) 7.07e5



PFBA-13C

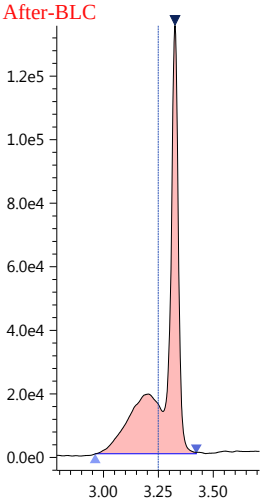
Conc 4.9980
RT 3.323 Area 2771499
Q 216.90>172.15 (-) 7.07e5



PFBA

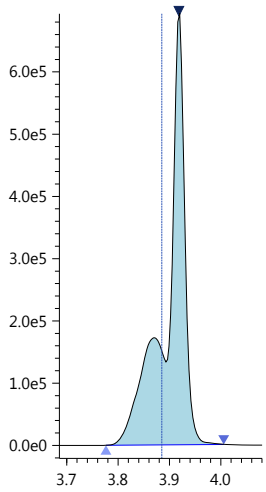
Conc 0.9117
RT 3.326 Area 502523
Q 213.00>169.10 (-) 1.36e5

After-BLC



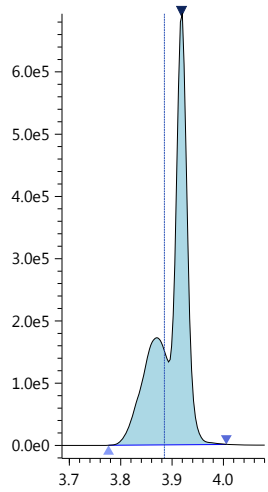
PFPeA-13C_IS

Conc 5.0000
RT 3.918 Area 1689488
ISTD 267.90>223.00 (-) 6.93e5



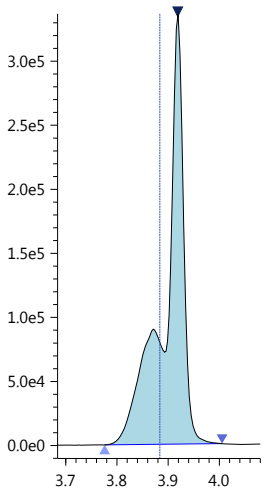
PFPeA-13C

Conc 5.0039
RT 3.918 Area 1689488
Q 267.90>223.00 (-) 6.93e5



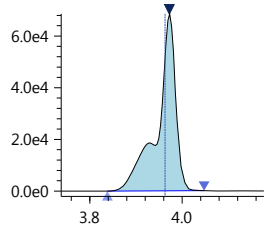
PFPeA

Conc 0.9118
RT 3.919 Area 845891
Q 263.05>219.10 (-) 3.37e5

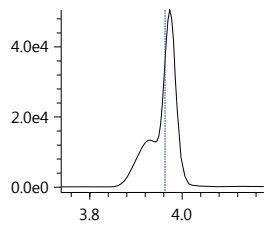


PFBS_1

Conc 0.9216
RT 3.972 Area 187112
R#1 70.66 (0.00)
Q 299.00>80.00 (-) 6.86e4

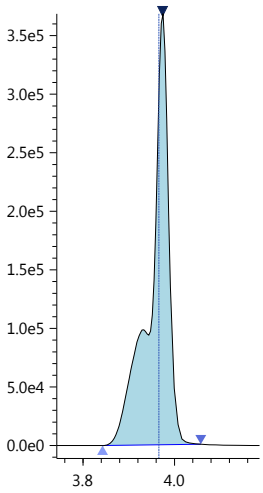


R1 298.80>99.00 (-) 5.06e4



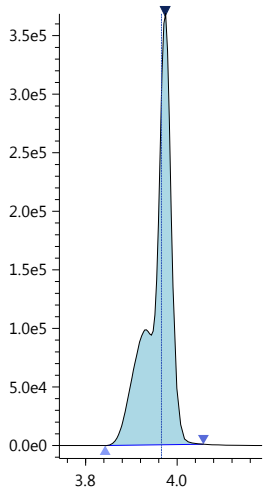
PFBS-13C

Conc 4.9974
RT 3.974 Area 1009175
Q 301.80>80.00 (-) 3.69e5



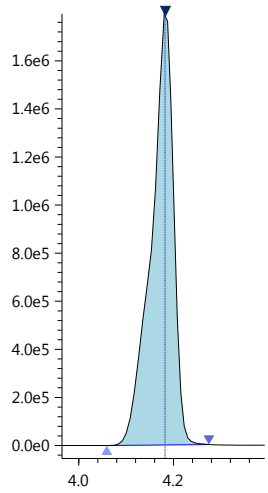
PFBS-13C_IS

Conc 5.0000
RT 3.974 Area 1009175
ISTD 301.80>80.00 (-) 3.69e5



PFHxA-13C_IS

Conc 5.0000
RT 4.183 Area 5846492
ISTD 314.90>270.10 (-) 1.80e6



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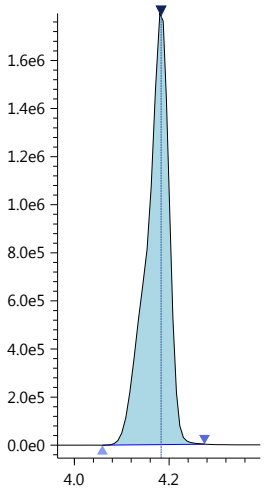
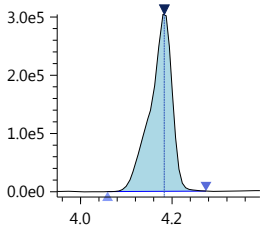
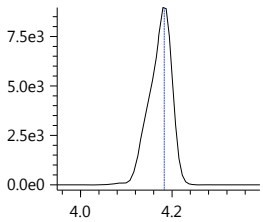
PFHxA-13C
Conc 5.0893
RT 4.183 Area 5846492
Q 314.90>270.10 (-) 1.80e6



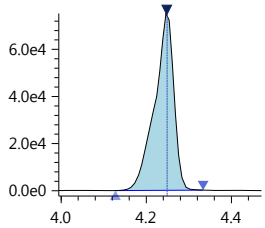
PFHxA
Conc 0.9293
RT 4.183 Area 1004850
R#1 2.96 (0.00)
Q 313.00>269.00 (-) 3.04e5



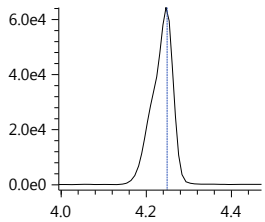
R1 313.00>119.10 (-) 8.96e3



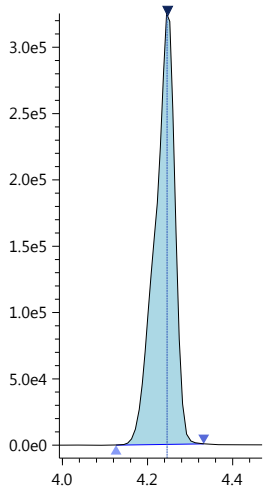
HPFO_DA
Conc 1.0935
RT 4.248 Area 236117
R#1 85.49 (0.00)
Q 329.00>169.00 (-) 7.52e4



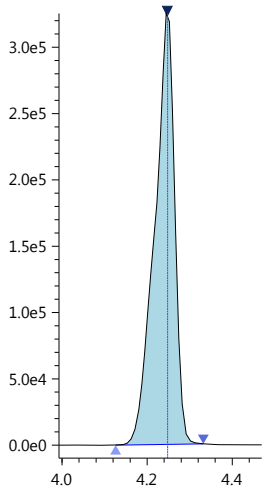
R1 329.00>285.10 (-) 6.43e4



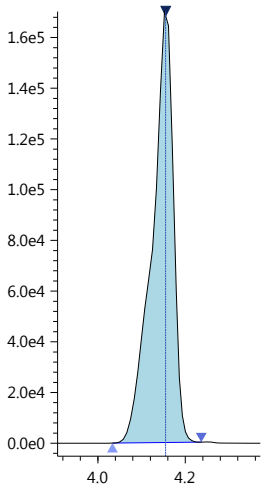
HFPO_DA-13C_IS
Conc 5.0000
RT 4.248 Area 1064275
ISTD 332.00>286.80 (-) 3.25e5



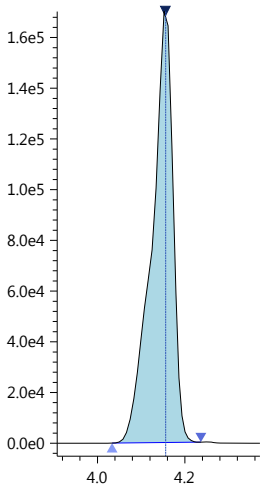
HFPO_DA-13C
Conc 4.9371
RT 4.248 Area 1064275
Q 332.00>286.80 (-) 3.25e5



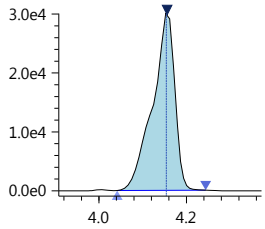
4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 573434
ISTD 328.80>309.05 (-) 1.70e5



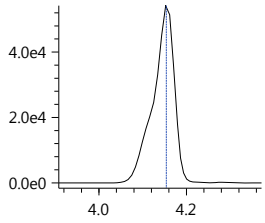
4_2-FTS-13C
Conc 4.9817
RT 4.155 Area 573434
Q 328.80>309.05 (-) 1.70e5



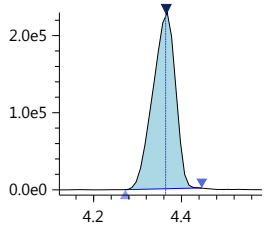
4_2-FTS_1
Conc 0.9586
RT 4.156 Area 106029
R#1 180.11 (0.00)
Q 327.00>307.05 (-) 3.01e4



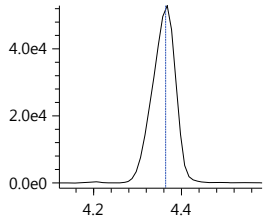
R1 327.00>81.10 (-) 5.42e4



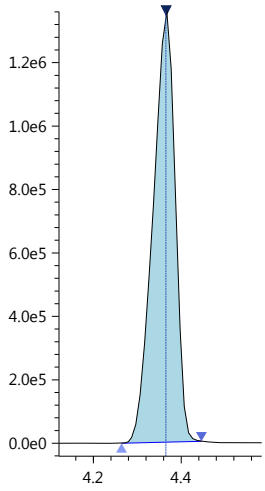
PFHpA
Conc 0.9271
RT 4.366 Area 822736
R#1 23.04 (0.00)
Q 362.90>319.00 (-) 2.30e5



R1 362.90>169.00 (-) 5.29e4



PFHpA-13C_IS
Conc 5.0000
RT 4.366 Area 4769670
ISTD 366.90>322.10 (-) 1.36e6



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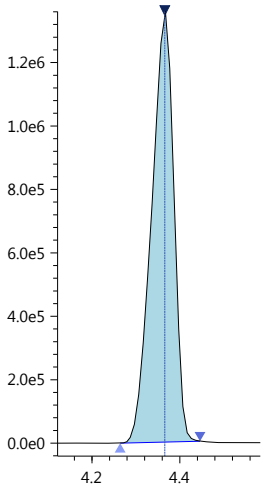
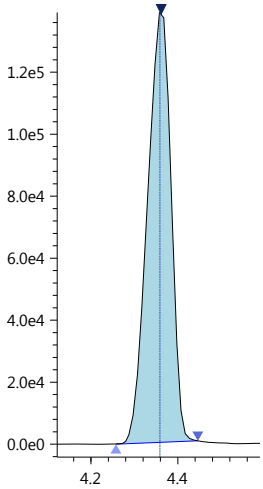
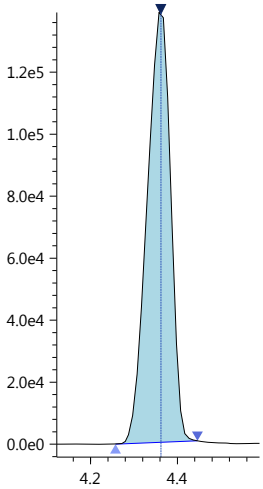
PFHpA-13C
Conc 5.0543
RT 4.366 Area 4769670
Q 366.90>322.10 (-) 1.36e6



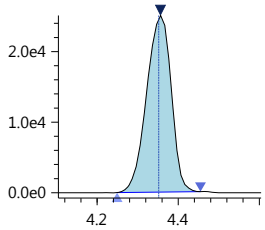
PFHxS-18O_IS
Conc 5.0000
RT 4.362 Area 525106
ISTD 402.70>84.05 (-) 1.39e5



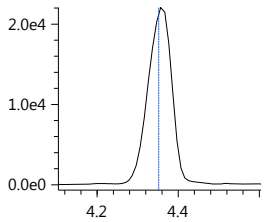
PFHxS-18O
Conc 4.5937
RT 4.362 Area 525106
Q 402.70>84.05 (-) 1.39e5



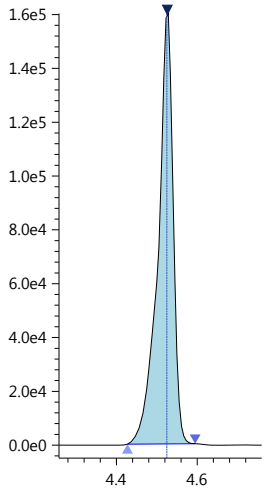
PFHxS_1
Conc 1.0131
RT 4.356 Area 105707
R#1 87.28 (0.00)
Q 399.00>80.00 (-) 2.51e4



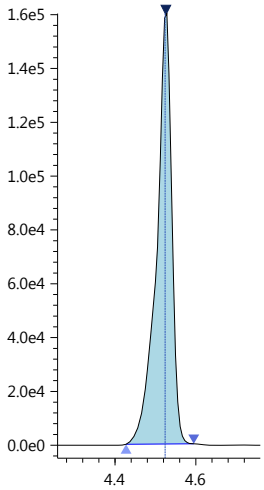
R1 399.00>99.00 (-) 2.21e4



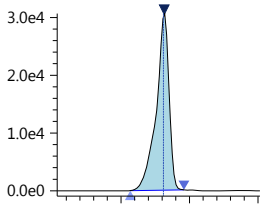
6_2-FTS-13C
Conc 5.1362
RT 4.526 Area 415919
Q 428.90>409.00 (-) 1.60e5



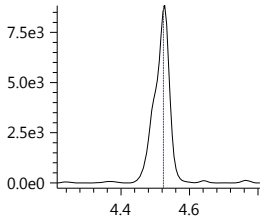
6_2-FTS-13C_IS
Conc 5.0000
RT 4.526 Area 415919
ISTD 428.90>409.00 (-) 1.60e5



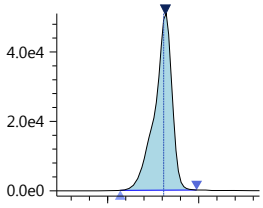
6_2-FTS_1
Conc 0.9635
RT 4.526 Area 79281
R#1 28.33 (0.00)
Q 427.00>407.00 (-) 3.07e4



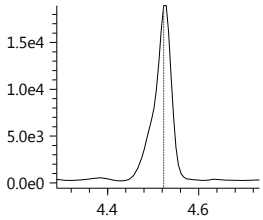
R1 427.00>80.90 (-) 8.83e3



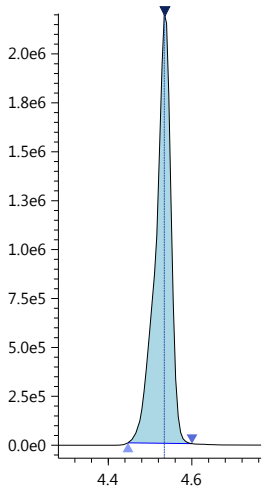
PFHpS_1
Conc 1.0637
RT 4.527 Area 133662
R#1 36.67 (0.00)
Q 449.00>80.15 (-) 5.11e4



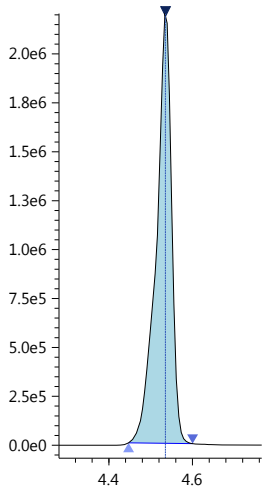
R1 449.00>99.20 (-) 1.89e4



PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 5574780
ISTD 416.80>372.05 (-) 2.21e6



PFOA-13C
Conc 5.1850
RT 4.536 Area 5574780
Q 416.80>372.05 (-) 2.21e6



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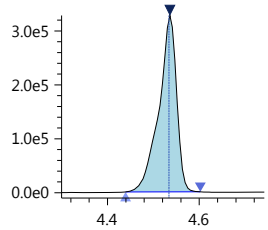
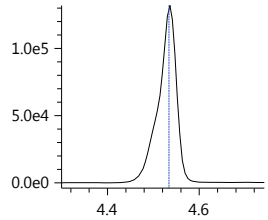
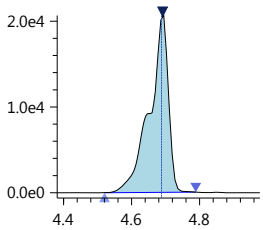
PFOA
Conc 0.9195
RT 4.536 Area 871926
R#1 40.18 (0.00)
Q 413.00>369.00 (-) 3.29e5



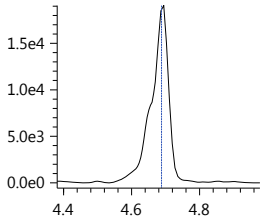
R1 413.00>169.10 (-) 1.32e5



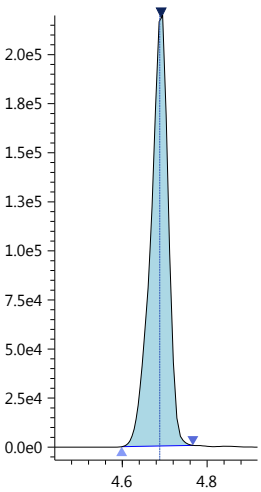
PFOS_1
Conc 0.8656
RT 4.691 Area 79084
R#1 91.62 (0.00)
Q 499.00>80.00 (-) 2.07e4



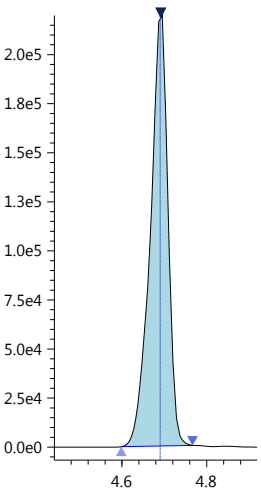
R1 499.00>99.00 (-) 1.91e4



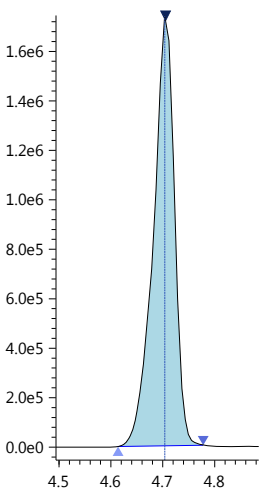
PFOS-13C_IS
Conc 5.0000
RT 4.691 Area 638099
ISTD 502.80>80.05 (-) 2.20e5



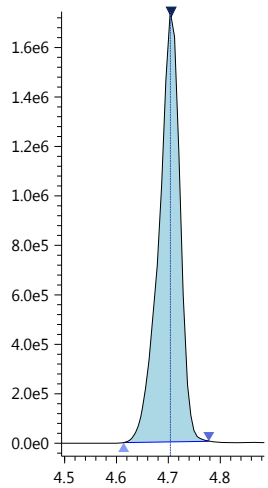
PFOS-13C
Conc 4.9510
RT 4.691 Area 638099
Q 502.80>80.05 (-) 2.20e5



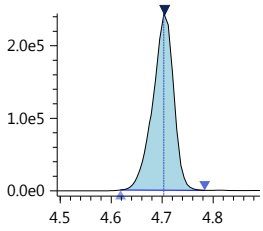
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4916750
ISTD 467.80>423.00 (-) 1.75e6



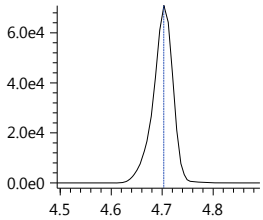
PFNA-13C
Conc 5.3020
RT 4.706 Area 4916750
Q 467.80>423.00 (-) 1.75e6



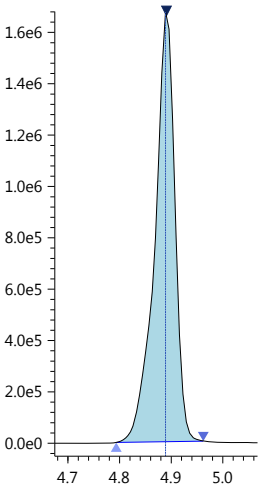
PFNA
Conc 0.9996
RT 4.705 Area 692058
R#1 29.04 (0.00)
Q 463.00>418.90 (-) 2.44e5



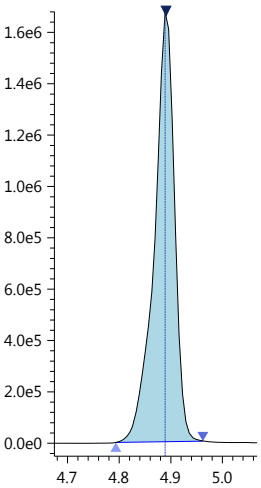
R1 463.00>219.00 (-) 7.09e4



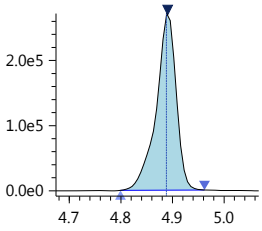
PFDA-13C_IS
Conc 5.0000
RT 4.891 Area 4536927
ISTD 514.80>469.95 (-) 1.68e6



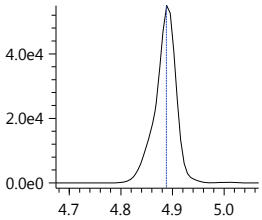
PFDA-13C
Conc 5.2805
RT 4.891 Area 4536927
Q 514.80>469.95 (-) 1.68e6



PFDA
Conc 0.9461
RT 4.891 Area 725314
R#1 20.25 (0.00)
Q 513.00>468.80 (-) 2.72e5



R1 513.00>219.10 (-) 5.50e4



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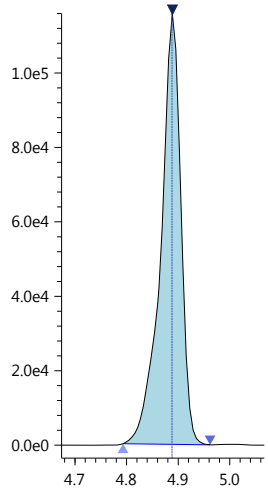
8_2-FTS-13C_IS

Conc 5.0000
RT 4.889 Area 312255

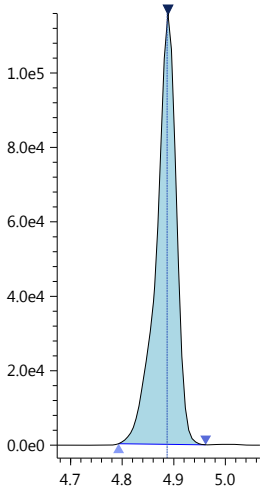
ISTD 528.80>509.00 (-) 1.16e5



8_2-FTS-13C

Conc 4.8911
RT 4.889 Area 312255

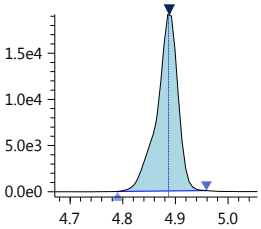
Q 528.80>509.00 (-) 1.16e5



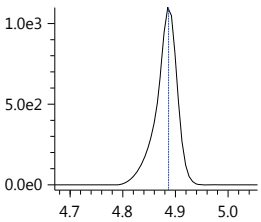
8_2-FTS_1

Conc 1.0701
RT 4.889 Area 53059
R#1 5.77 (0.00)

Q 527.10>506.90 (-) 1.92e4



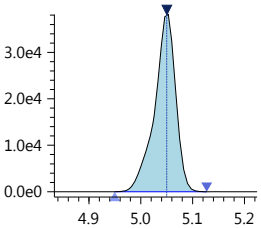
R1 527.20>487.00 (-) 1.10e3



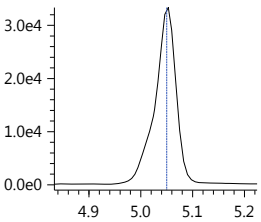
PFDS_1

Conc 0.9854
RT 5.050 Area 108494
R#1 87.80 (0.00)

Q 599.00>79.90 (-) 3.82e4



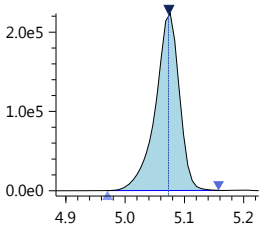
R1 599.00>99.10 (-) 3.34e4



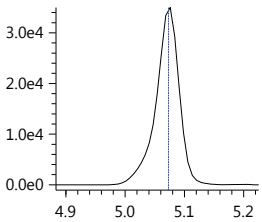
PFUnA

Conc 0.9293
RT 5.074 Area 627247
R#1 15.54 (0.00)

Q 563.00>518.90 (-) 2.24e5



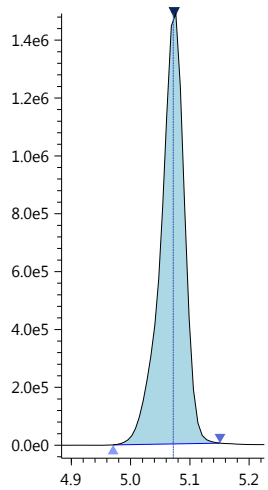
R1 563.00>219.00 (-) 3.50e4



PFUnA-13C_IS

Conc 5.0000
RT 5.074 Area 4152592

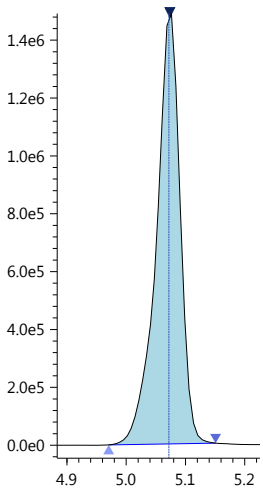
ISTD 564.80>519.95 (-) 1.49e6



PFUnA-13C

Conc 4.9692
RT 5.074 Area 4152592

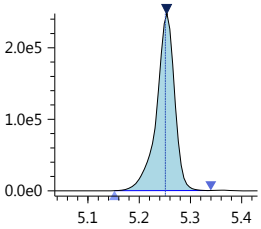
Q 564.80>519.95 (-) 1.49e6



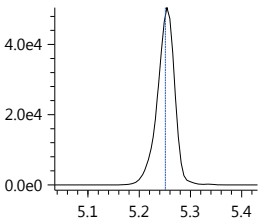
PFDoA

Conc 0.9733
RT 5.254 Area 605650
R#1 20.25 (0.00)

Q 613.05>569.00 (-) 2.48e5



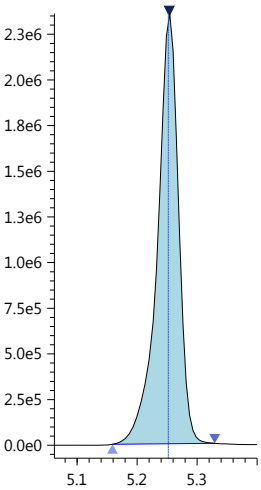
R1 613.05>169.00 (-) 5.05e4



PFDoA-13C

Conc 5.0469
RT 5.254 Area 5764848

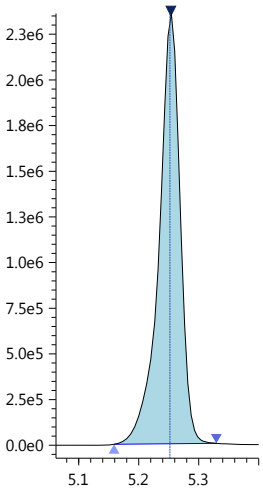
Q 614.80>569.95 (-) 2.36e6



PFDoA-13C_IS

Conc 5.0000
RT 5.254 Area 5764848

ISTD 614.80>569.95 (-) 2.36e6



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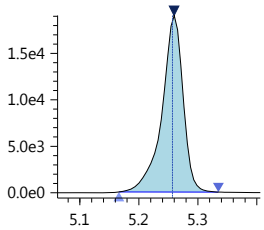
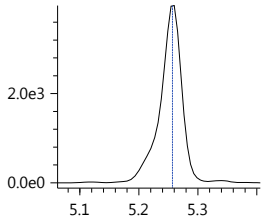
10_2-FtS_1

Conc 1.0336
RT 5.260 Area 47177
R#1 20.77 (0.00)

Q 627.00>606.95 (-) 1.91e4



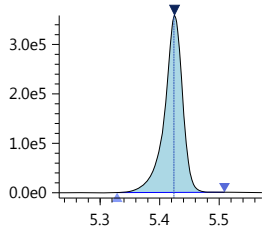
R1 627.00>81.25 (-) 3.97e3



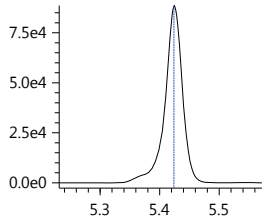
PFTrDA

Conc 0.9405
RT 5.425 Area 752889
R#1 25.87 (0.00)

Q 663.00>618.90 (-) 3.59e5



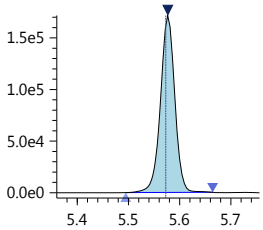
R1 662.90>169.00 (-) 8.86e4



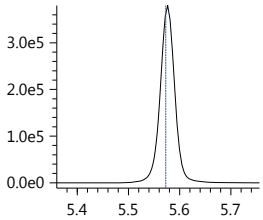
PFTeDA

Conc 0.9654
RT 5.577 Area 333149
R#1 219.18 (0.00)

Q 713.40>669.00 (-) 1.72e5



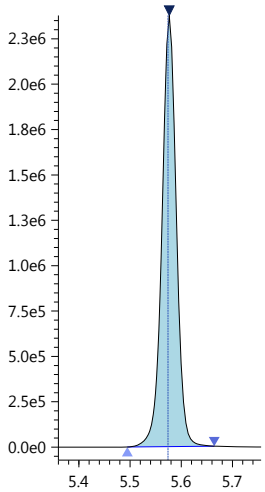
R1 713.40>169.10 (-) 3.80e5



PFTeDA-13C

Conc 5.1394
RT 5.576 Area 4624183

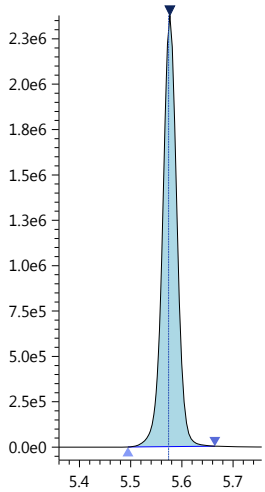
Q 714.70>669.90 (-) 2.38e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.576 Area 4624183

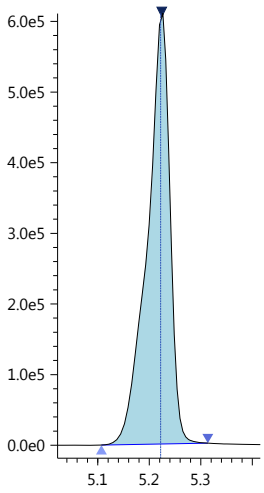
ISTD 714.70>669.90 (-) 2.38e6



FOSA-13C_IS

Conc 5.0000
RT 5.224 Area 1852618

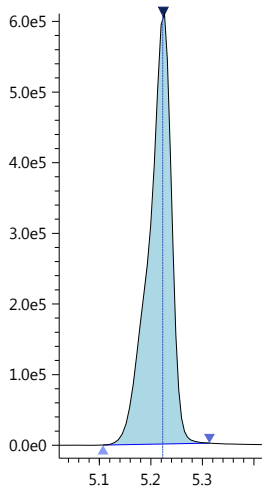
ISTD 506.00>78.05 (-) 6.11e5



FOSA-13C

Conc 5.1820
RT 5.224 Area 1852618

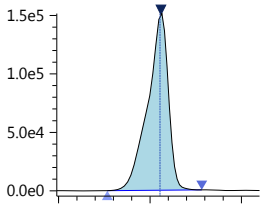
Q 506.00>78.05 (-) 6.11e5



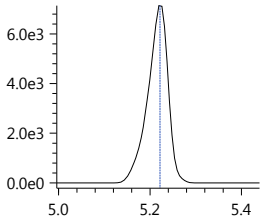
FOSA

Conc 0.9490
RT 5.224 Area 470799
R#1 4.89 (0.00)

Q 498.20>78.00 (-) 1.52e5



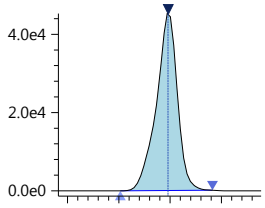
R1 498.20>64.10 (-) 7.14e3



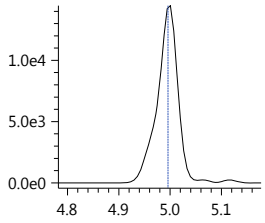
N-MeFOSAA

Conc 1.0303
RT 4.997 Area 129013
R#1 32.65 (0.00)

Q 570.20>419.00 (-) 4.53e4



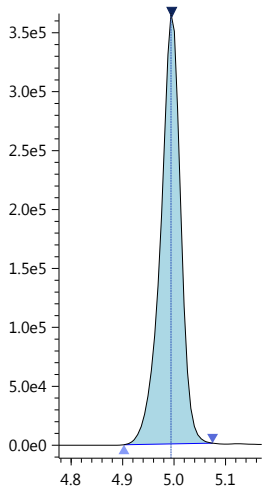
R1 570.20>512.00 (-) 1.45e4



N-MeFOSAA-d3

Conc 5.2218
RT 4.996 Area 994624

Q 572.80>419.05 (-) 3.66e5



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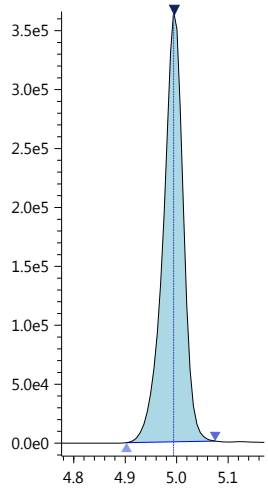
N-MeFOSAA-d3_IS

Conc 5.0000
RT 4.996 Area 994624

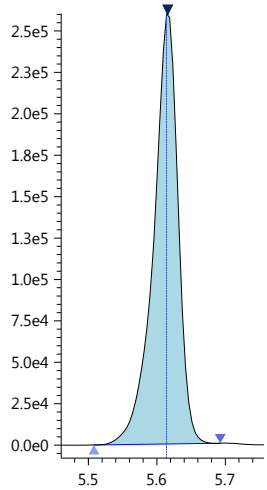
ISTD 572.80>419.05 (-) 3.66e5



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.616 Area 648476

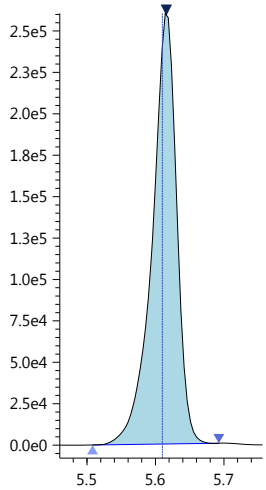
ISTD 514.90>168.90 (-) 2.61e5



N-MeFOSA-d3

Conc 5.1384
RT 5.616 Area 648476

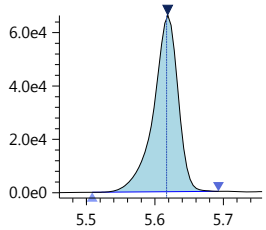
Q 514.90>168.90 (-) 2.61e5



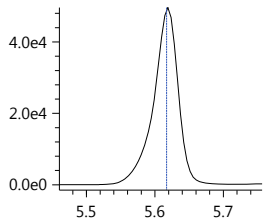
N-MeFOSA

Conc 0.9903
RT 5.619 Area 164169
R#1 75.12 (0.00)

Q 512.00>169.10 (-) 6.64e4



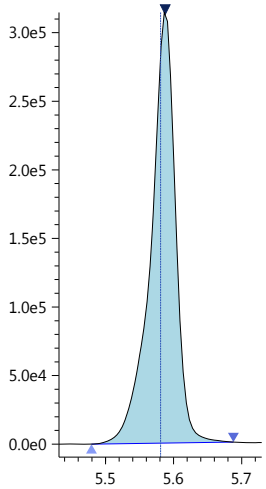
R1 512.00>219.00 (-) 4.96e4



N-MeFOSE-d7

Conc 5.1880
RT 5.588 Area 792164

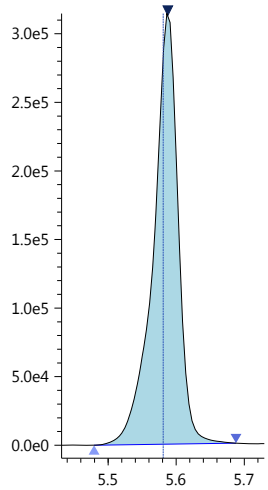
Q 622.70>59.10 (-) 3.15e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.588 Area 792164

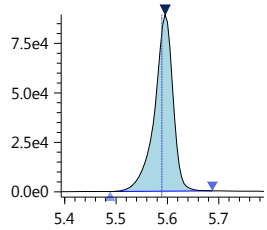
ISTD 622.70>59.10 (-) 3.15e5



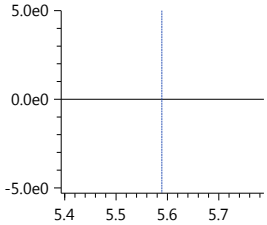
N-MeFOSE

Conc 1.0139
RT 5.596 Area 221031
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 8.96e4



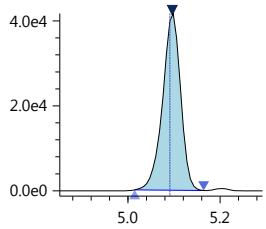
R1 556.00>121.20 (-) 0.00e0



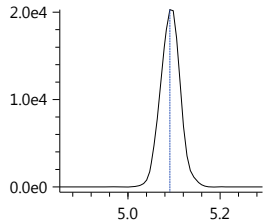
N-EtFOSAA

Conc 1.1583
RT 5.096 Area 113137
R#1 50.75 (0.00)

Q 584.20>418.95 (-) 4.17e4



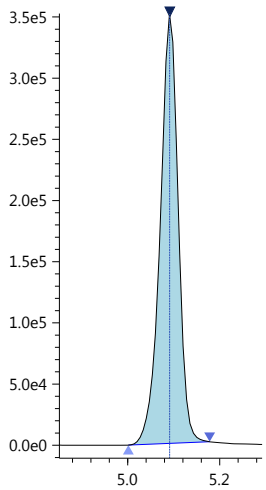
R1 584.20>526.10 (-) 2.03e4



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.092 Area 956838

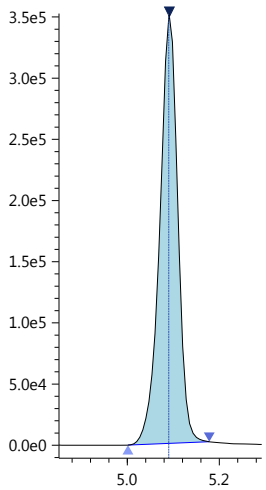
ISTD 588.80>419.00 (-) 3.53e5



N-EtFOSAA-d5

Conc 5.2333
RT 5.092 Area 956838

Q 588.80>419.00 (-) 3.53e5



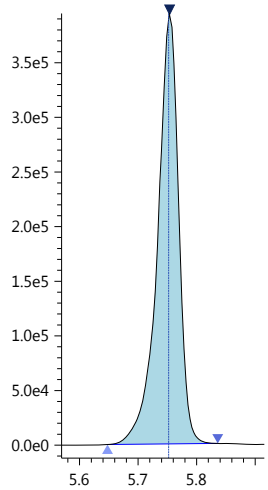
Insight Report

Printed at 1/21/2019 10:49:39 AM

N-EtFOSA-d9_IS

Conc 5.0000
RT 5.754 Area 987047

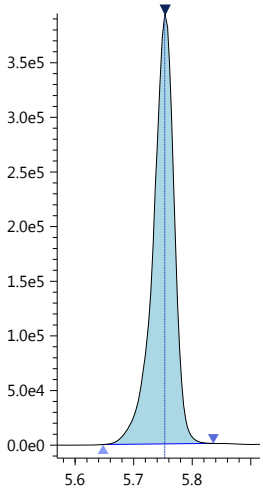
ISTD 530.90>169.15 (-) 3.95e5



N-EtFOSA-d9

Conc 5.0090
RT 5.754 Area 987047

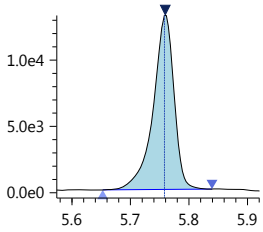
Q 530.90>169.15 (-) 3.95e5



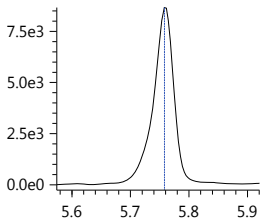
N-EtFOSA

Conc 1.0288
RT 5.760 Area 32460
R#1 66.25 (0.00)

Q 526.90>169.10 (-) 1.34e4



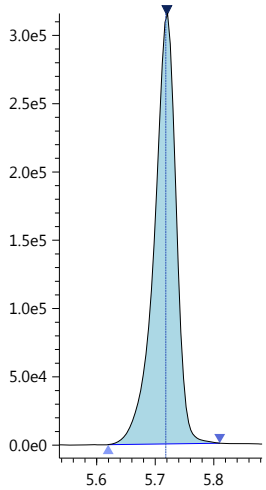
R1 526.90>219.00 (-) 8.66e3



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.720 Area 822297

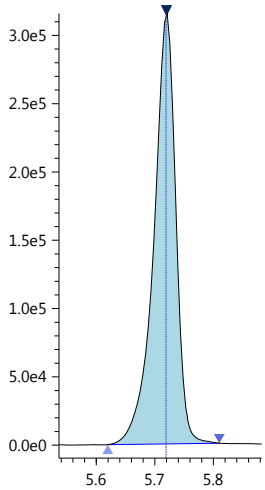
ISTD 638.70>59.10 (-) 3.16e5



N-EtFOSE-d9

Conc 4.8853
RT 5.720 Area 822297

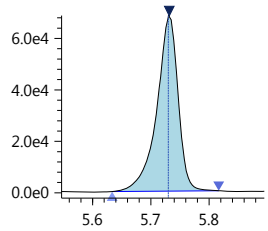
Q 638.70>59.10 (-) 3.16e5



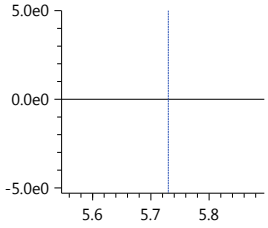
N-EtFOSE

Conc 1.0199
RT 5.732 Area 172351
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 6.89e4



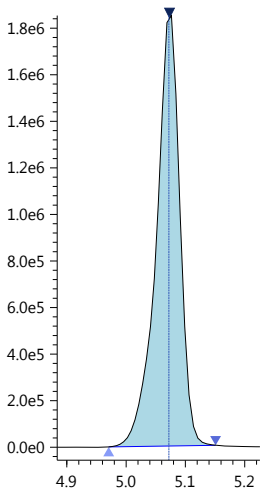
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.073 Area 5137317

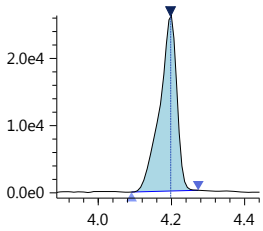
ISTD 570.00>525.00 (-) 1.85e6



PFPeS

Conc 0.9012
RT 4.197 Area 84966
R#1 163.01 (0.00)

Q 349.00>99.00 (-) 2.64e4



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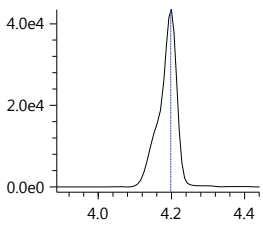
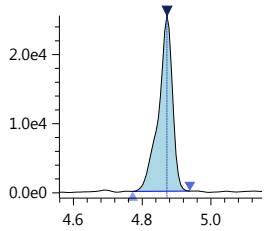


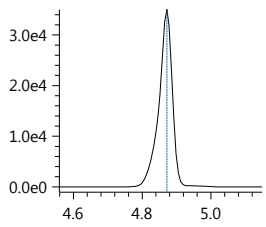
PFNS

Conc 0.9424
RT 4.872 Area 71684
R#1 136.88 (0.00)

Q 549.00>99.00 (-) 2.57e4



R1 549.00>79.95 (-) 3.50e4



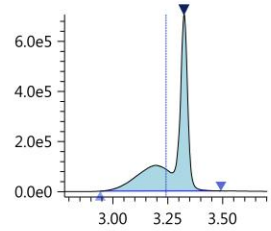
Insight Report

Printed at 1/21/2019 9:31:25 AM

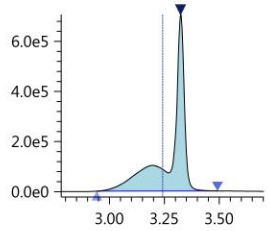
190118_031

Sample ID: 1.0 PPB ICV
Date acquired: 1/18/2019 7:10:46 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_031.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.323 Area 2771499
ISTD 216.90>172.15 (-) 7.07e5



PFBA-13C
Conc 4.9980
RT 3.323 Area 2771499
Q 216.90>172.15 (-) 7.07e5



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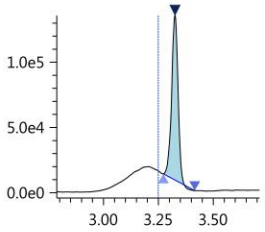
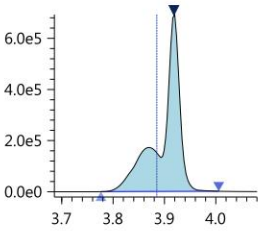
Conc 0.0954
RT 3.326 Area 253328
Q 213.00>169.10 (-) 1.36e5



PFPeA-13C_IS
Conc 5.0000
RT 3.918 Area 1689488
ISTD 267.90>223.00 (-) 6.93e5



PFPeA-13C
Conc 5.0039
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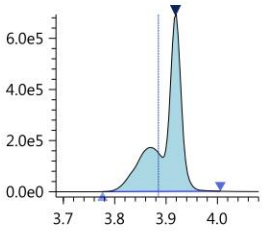
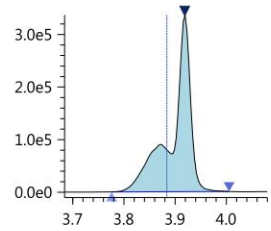
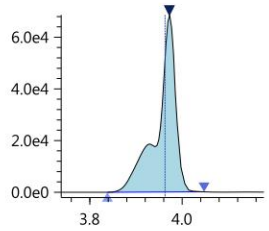
Q 267.90>223.00 (-) 6.93e5



PFPeA
Conc 0.2174
RT 3.919 Area 845891
Q 263.05>219.10 (-) 3.37e5



PFBS_1
Conc 0.2015
RT 3.972 Area 187112
Q 299.00>80.00 (-) 6.86e4



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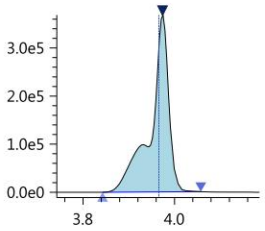
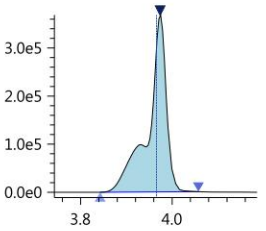
Q 301.80>80.00 (-) 3.69e5



PFBS-13C_IS
Conc 5.0000
RT 3.974 Area 1009175
ISTD 301.80>80.00 (-) 3.69e5



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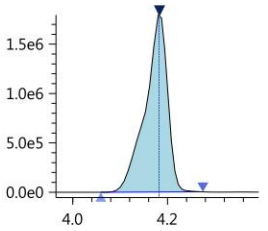
RT 4.183 Area 5846492
ISTD 314.90>270.10 (-) 1.80e6



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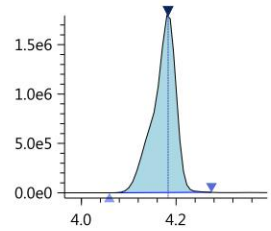
Conc 5.0893
RT 4.183 Area 5846492
Q 314.90>270.10 (-) 1.80e6



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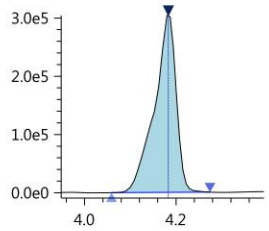
Conc 0.2052
RT 4.183 Area 1004850
Q 313.00>269.00 (-) 3.04e5



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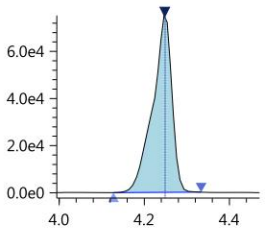
RT 4.248 Area 236117
Q 329.00>169.00 (-) 7.52e4



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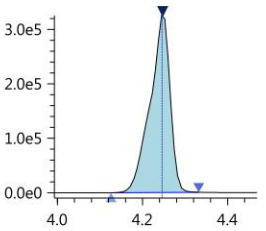
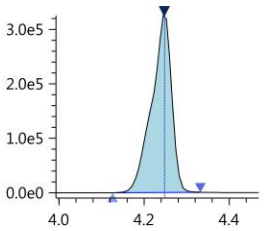
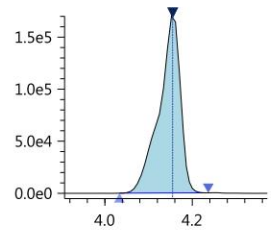
RT 4.248 Area 1064275
ISTD 332.00>286.80 (-) 3.25e5



HFPO_DA-13C
Conc 4.9371
RT 4.248 Area 1064275
Q 332.00>286.80 (-) 3.25e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 573434
ISTD 328.80>309.05 (-) 1.70e5



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Conc 4.9817
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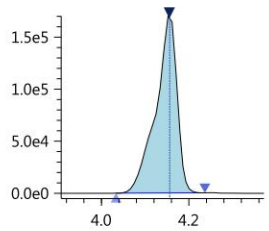
Q 328.80>309.05 (-) 1.70e5



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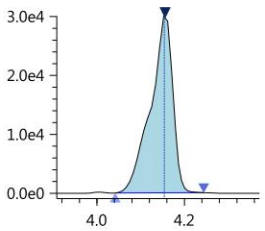
RT 4.156 Area 106029
Q 327.00>307.05 (-) 3.01e4



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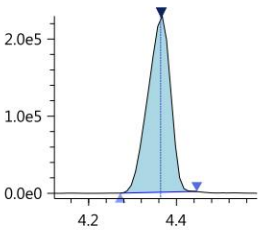
Q 362.90>319.00 (-) 2.30e5



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Conc 5.0000
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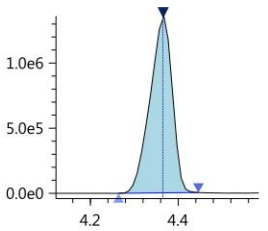
ISTD 366.90>322.10 (-) 1.36e6



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PFHpA-13C
Conc 5.0543
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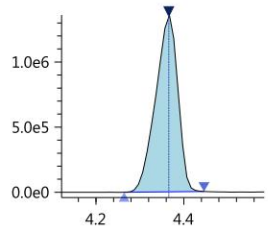
Q 366.90>322.10 (-) 1.36e6



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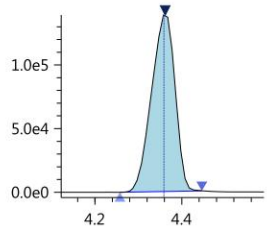
Conc 5.0000
RT 4.362 Area 525106
ISTD 402.70>84.05 (-) 1.39e5



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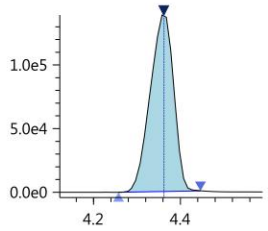
Q 402.70>84.05 (-) 1.39e5



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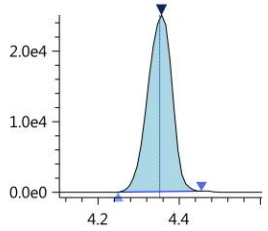
Conc 0.2237
RT 4.356 Area 105707
Q 399.00>80.00 (-) 2.51e4



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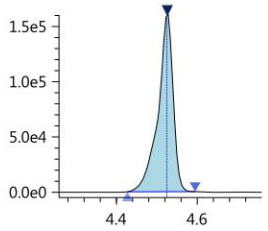
Q 428.90>409.00 (-) 1.60e5



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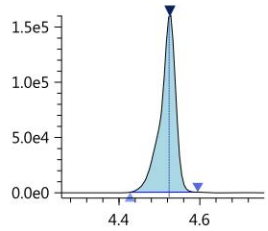
ISTD 428.90>409.00 (-) 1.60e5



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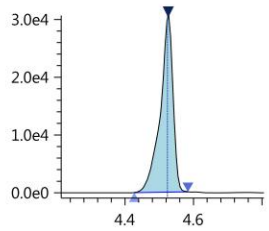
RT 4.526 Area 79281
Q 427.00>407.00 (-) 3.07e4



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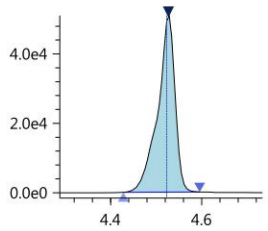
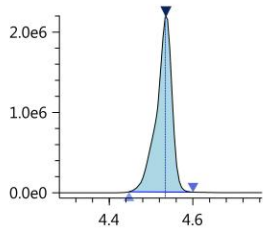
Conc 0.2266
RT 4.527 Area 133662
Q 449.00>80.15 (-) 5.11e4



PFOA-13C_IS
Conc 5.0000
RT 4.536 Area 5574780
ISTD 416.80>372.05 (-) 2.21e6



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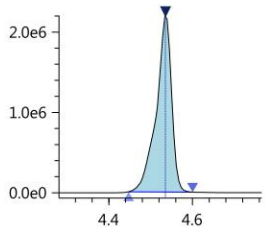
Q 416.80>372.05 (-) 2.21e6



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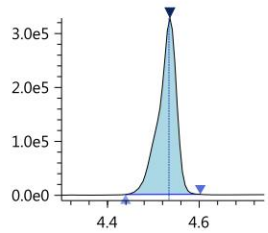
Q 413.00>369.00 (-) 3.29e5



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Conc 0.1883
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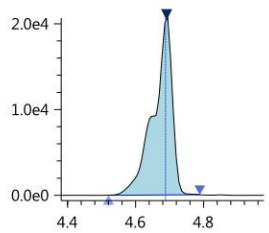
Q 499.00>80.00 (-) 2.07e4



PFOS-13C_IS
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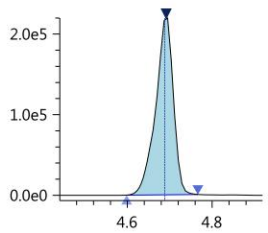
RT 4.691 Area 638099
ISTD 502.80>80.05 (-) 2.20e5



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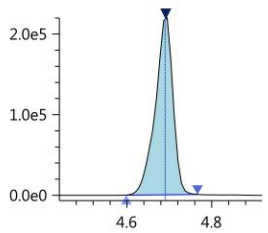
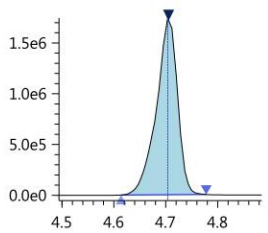
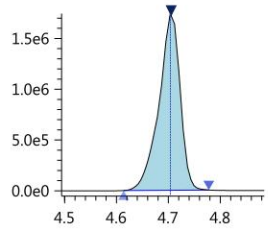
Conc 4.9510
RT 4.691 Area 638099
Q 502.80>80.05 (-) 2.20e5



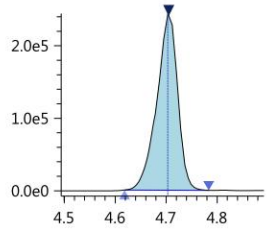
PFNA-13C_IS
Conc 5.0000
RT 4.706 Area 4916750
ISTD 467.80>423.00 (-) 1.75e6



PFNA-13C
Conc 5.3020
RT 4.706 Area 4916750
Q 467.80>423.00 (-) 1.75e6



PFNA
Conc 0.2152
RT 4.705 Area 692058
Q 463.00>418.90 (-) 2.44e5



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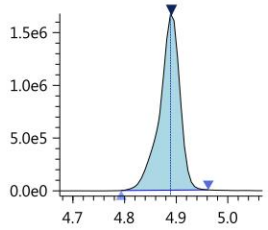
Conc 5.0000
RT 4.891 Area 4536927
ISTD 514.80>469.95 (-) 1.68e6



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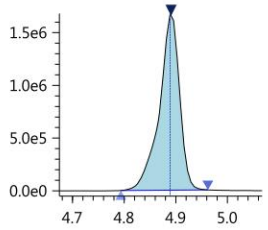
Q 514.80>469.95 (-) 1.68e6



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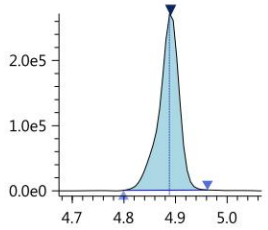
Conc 0.2079
RT 4.891 Area 725314
Q 513.00>468.80 (-) 2.72e5



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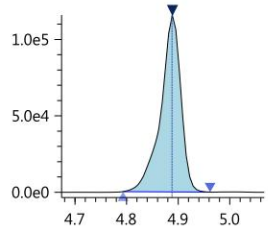
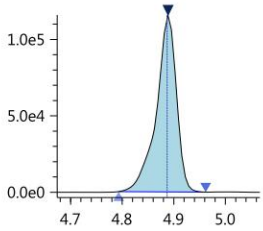
8_2-FTS-13C_IS
Conc 5.0000
RT 4.889 Area 312255
ISTD 528.80>509.00 (-) 1.16e5



8_2-FTS-13C
Conc 4.8911
RT 4.889 Area 312255
Q 528.80>509.00 (-) 1.16e5



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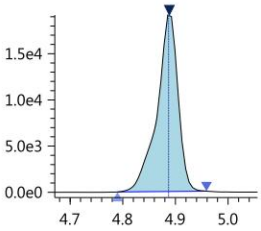
Conc 0.2426
RT 4.889 Area 53059
Q 527.10>506.90 (-) 1.92e4



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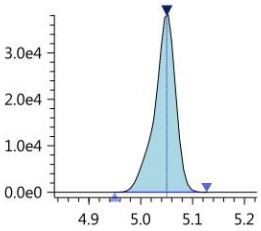
Q 599.00>79.90 (-) 3.82e4



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Conc 0.2065
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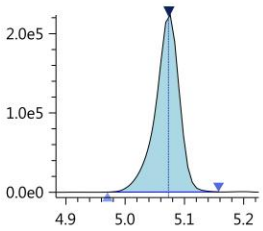
Q 563.00>518.90 (-) 2.24e5



PFUnA-13C_IS
Conc 5.0000
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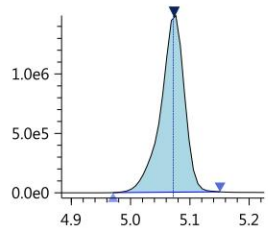
ISTD 564.80>519.95 (-) 1.49e6



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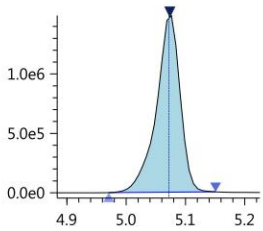
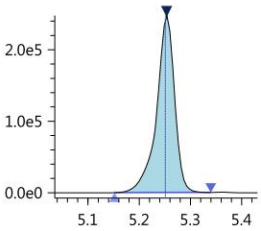
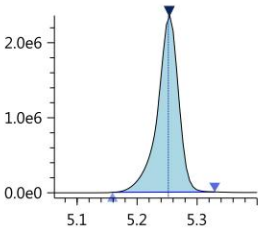
RT 5.074 Area 4152592
Q 564.80>519.95 (-) 1.49e6



PFDoA
Conc 0.2135
RT 5.254 Area 605650
Q 613.05>569.00 (-) 2.48e5



PFDoA-13C
Conc 5.0469
RT 5.254 Area 5764848
Q 614.80>569.95 (-) 2.36e6



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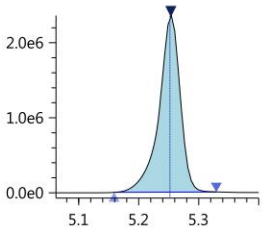
Conc 5.0000
RT 5.254 Area 5764848
ISTD 614.80>569.95 (-) 2.36e6



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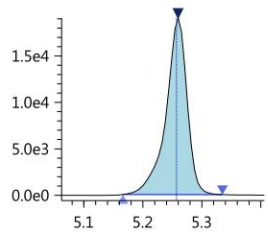
Conc 0.2368
RT 5.260 Area 47177
Q 627.00>606.95 (-) 1.91e4



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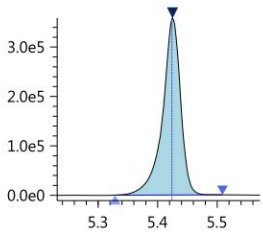
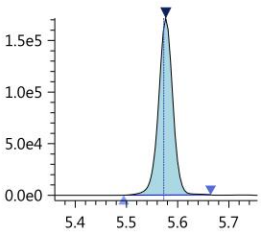
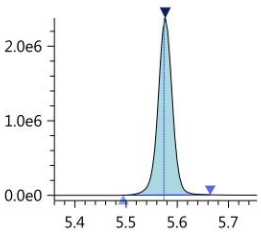
Conc 0.2064
RT 5.425 Area 752889
Q 663.00>618.90 (-) 3.59e5



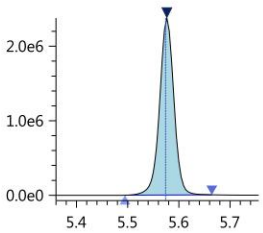
PFTeDA
Conc 0.2296
RT 5.577 Area 333149
Q 713.40>669.00 (-) 1.72e5



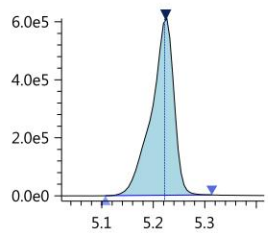
PFTeDA-13C
Conc 5.1394
RT 5.576 Area 4624183
Q 714.70>669.90 (-) 2.38e6



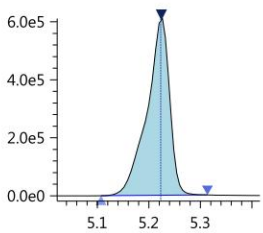
PFTeDA-13C_IS
Conc 5.0000
RT 5.576 Area 4624183
ISTD 714.70>669.90 (-) 2.38e6



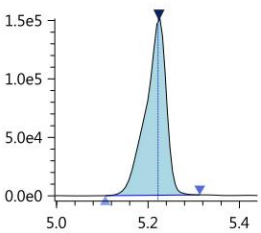
FOSA-13C_IS
Conc 5.0000
RT 5.224 Area 1852618
ISTD 506.00>78.05 (-) 6.11e5



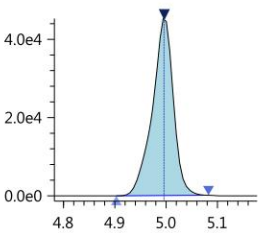
FOSA-13C
Conc 5.1820
RT 5.224 Area 1852618
Q 506.00>78.05 (-) 6.11e5



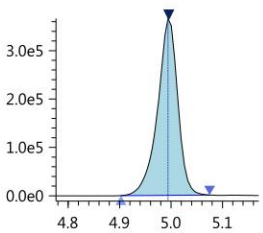
FOSA
Conc 0.2084
RT 5.224 Area 470799
Q 498.20>78.00 (-) 1.52e5



N-MeFOSAA
Conc 0.2358
RT 4.997 Area 129013
Q 570.20>419.00 (-) 4.53e4



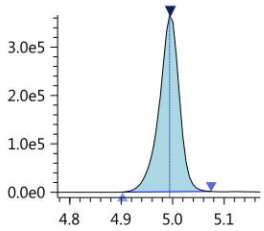
N-MeFOSAA-d3
Conc 5.2218
RT 4.996 Area 994624
Q 572.80>419.05 (-) 3.66e5



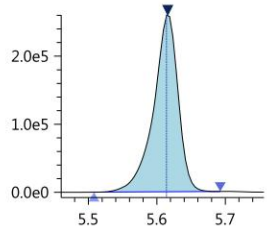
Insight Report

Printed at 1/21/2019 9:31:25 AM

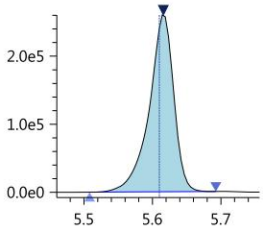
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.996 Area 994624
ISTD 572.80>419.05 (-) 3.66e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.616 Area 648476
ISTD 514.90>168.90 (-) 2.61e5



N-MeFOSA-d3
Conc 5.1384
RT 5.616 Area 648476
Q 514.90>168.90 (-) 2.61e5



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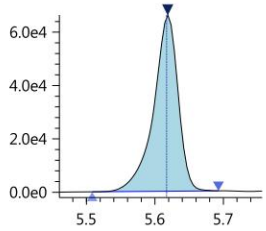
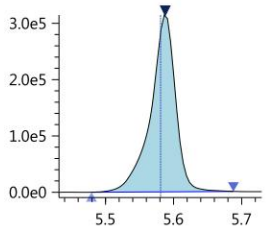
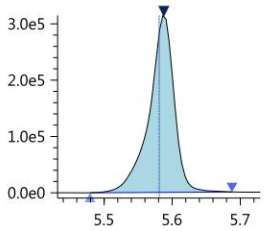
Conc 0.2176
RT 5.619 Area 164169
Q 512.00>169.10 (-) 6.64e4



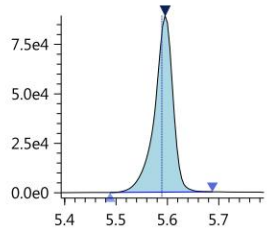
N-MeFOSE-d7
Conc 5.1880
RT 5.588 Area 792164
Q 622.70>59.10 (-) 3.15e5



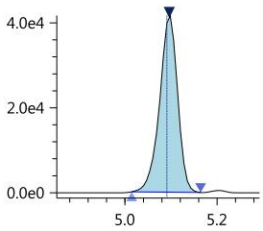
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 792164
ISTD 622.70>59.10 (-) 3.15e5



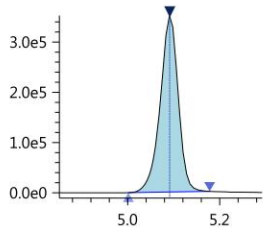
N-MeFOSE
Conc 0.2195
RT 5.596 Area 221031
Q 616.00>59.00 (-) 8.96e4



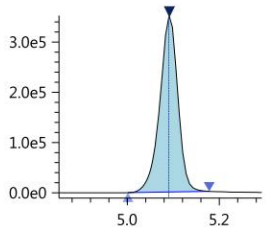
N-EtFOSAA
Conc 0.2546
RT 5.096 Area 113137
Q 584.20>418.95 (-) 4.17e4



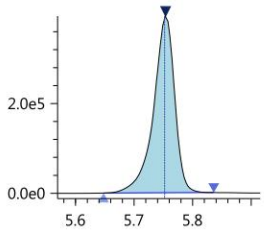
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 956838
ISTD 588.80>419.00 (-) 3.53e5



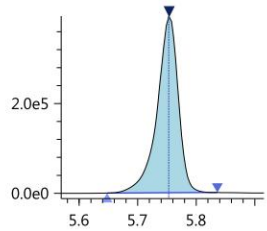
N-EtFOSAA-d5
Conc 5.2333
RT 5.092 Area 956838
Q 588.80>419.00 (-) 3.53e5



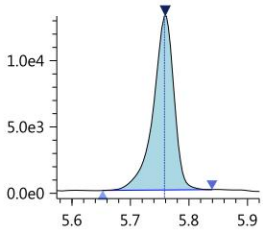
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.754 Area 987047
ISTD 530.90>169.15 (-) 3.95e5



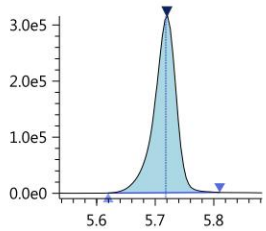
N-EtFOSA-d9
Conc 5.0090
RT 5.754 Area 987047
Q 530.90>169.15 (-) 3.95e5



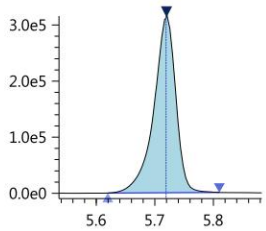
N-EtFOSA
Conc 0.2201
RT 5.760 Area 32460
Q 526.90>169.10 (-) 1.34e4



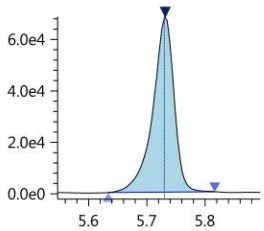
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.720 Area 822297
ISTD 638.70>59.10 (-) 3.16e5



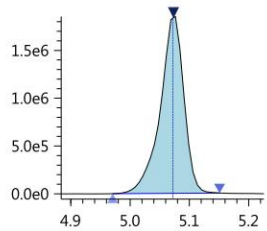
N-EtFOSE-d9
Conc 4.8853
RT 5.720 Area 822297
Q 638.70>59.10 (-) 3.16e5



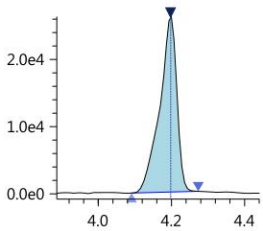
N-EtFOSE
Conc 0.2211
RT 5.732 Area 172351
Q 630.00>58.90 (-) 6.89e4



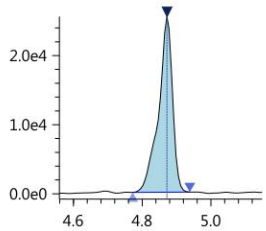
13C7-PFUnDA_IS
Conc 5.0000
RT 5.073 Area 5137317
ISTD 570.00>525.00 (-) 1.85e6



PFPeS
Conc 0.2060
RT 4.197 Area 84966
Q 349.00>99.00 (-) 2.64e4



PFNS
Conc 0.2098
RT 4.872 Area 71684
Q 549.00>99.00 (-) 2.57e4



1st CM 01/21/19
2nd 01/23/19

Validation Report

Data File: J:\LCMS06\Data\190118_b1\190118_032
Lab ID: KQ1900761-04
RunType: CCB
Matrix: Water

Date Acquired: 1/18/19 19:21
Batch ID: 622537
Analysis Method: PFC/537M/PFOA

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: _____

Printed: 1/21/19 15:11
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 01/21/19
2nd 01/23/19

Quantitation Report

Data File:	J:\LCMS06\Data\190118_b1\190118_032	**Instrument:**	K-LCMS-06
Acqu Date:	1/18/19 19:21	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1900761-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	1/10/19	**Receive Date:**	1/15/19

Analysis Lot:	622537	**Prep Lot:**		**Report Group:**	KQ1900761
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900021
		Report List ID:	20091

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.069	0.00	4801843	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	3.973	0.00	984179	5.2142	104	20 - 109	Y
18O2-PFHxS	4.361	0.00	537547	5.0310	101	26 - 122	Y
13C4-PFOS	4.690	0.00	636868	5.2867	106	25 - 121	Y
13C4-PFBA	3.325	+0.00	2679474	5.1696	103	27 - 124	Y
13C5-PFPeA	3.917	0.00	1624613	5.1479	103	27 - 138	Y
13C2-PFHxA	4.181	0.00	5931833	5.5243	110	28 - 132	Y
13C4-PFHpA	4.361	-0.01	4250204	4.8185	96	19 - 139	Y
13C4-PFOA	4.533	0.00	5283033	5.2569	105	22 - 130	Y
13C5-PFNA	4.702	0.00	4363579	5.0343	101	20 - 127	Y
13C2-PFDA	4.887	0.00	4183936	5.2099	104	24 - 125	Y
13C2-PFUnDA	5.070	0.00	4111751	5.2640	105	22 - 125	Y
13C2-PFDoDA	5.250	0.00	5792394	5.4253	109	19 - 122	Y
13C2-PFTeDA	5.572	0.00	4511655	5.3646	107	13 - 124	Y
13C8-FOSA	5.220	0.00	1764345	5.2798	106	18 - 109	Y
D3-MeFOSA	5.611	0.00	604622	5.1256	103	15 - 153	Y
D5-EtFOSA	5.749	-0.01	920646	4.9984	100	25 - 107	Y
D7-MeFOSE	5.584	0.00	731109	5.1227	102	24 - 112	Y
D9-EtFOSE	5.716	0.00	833616	5.2986	106	19 - 109	Y
D3-MeFOSAA	4.991	-0.01	974188	5.4718	109	9 - 123	Y
D5-EtFOSAA	5.087	-0.01	902360	5.2801	106	12 - 126	Y
13C2-4:2 FTS	4.155		555272	5.1610	103	10 - 197	Y
13C2-6:2 FTS	4.524	0.00	393915	5.2044	104	10 - 226	Y
13C2-8:2 FTS	4.885	0.00	301006	5.0443	101	10 - 202	Y
13C3-HFPO-DA	4.247	0.00	1087823	5.3989	108	22 - 135	Y

1st CM 01/21/19
2nd 01/23/19

Data File:	J:\LCMS06\Data\190118_b1\190118_032	**Instrument:**	K-LCMS-06
Acqu Date:	1/18/19 19:21	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1900761-04	**Raw Units:**	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.933	-0.04	315	0.0016	0.051	U	Y
Perfluoropentane sulfonic acid (PFPeS)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.347	-0.01	951	0.0089	0.28	U	Y
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.687	0.00	498	0.0055	0.18	U	Y
Perfluorononane sulfonic acid (PFNS)	0		0	0	0	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.918	0.00	80787	0.0088	0.28	U	Y
Perfluorohexanoic acid (PFHxA)	4.179	0.00	10053	0.0110	0.35	U	Y
Perfluoroheptanoic acid (PFHpA)	4.365	0.00	4226	0.0142	0.45	U	Y
Perfluorooctanoic acid (PFOA)	4.534	0.00	8613	0.0054	0.17	U	Y
Perfluorononanoic acid (PFNA)	4.688	-0.02	1380	0.0073	0.23	U	Y
Perfluorodecanoic acid (PFDA)	4.887	0.00	2007	0.0028	0.090	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.068	-0.01	9408	0.0089	0.28	U	Y
Perfluorododecanoic acid (PFDoDA)	5.241	-0.01	2393	0.0065	0.21	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.417	-0.01	2528	0.0067	0.21	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.572	-0.01	31203	0.0073	0.23	U	Y
Perfluorooctane sulfonamide (FOSA)	5.224		1576	0.0033	0.11	U	Y
N-Methyl perfluorooctane sulfonamide (MeFOSA)	5.609	-0.01	1349	0.0087	0.28	U	Y
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	0		0	0	0	U	Y
N-Methyl perfluorooctane sulfonamidoethanol	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoethanol	0		0	0	0	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	4.988	-0.01	3068	0.0250	0.80	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	4.143	-0.01	26	0.0002	0.0064	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.530	+0.00	470	0.0060	0.19	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.883	-0.01	32	0.0007	0.022	U	Y
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	5.252	-0.01	37	0.0008	0.026	U	Y
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0		0	0	0	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

Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_032

Sample ID: IB
Date acquired: 1/18/2019 7:21:15 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_032.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.325	2679474	2679474	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.325	2679474	4801843	26	5.1696	ng/mL	----
PFBA	ND(W/B)	----	----	2679474	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.917	1624613	1624613	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.917	1624613	4801843	26	5.1479	ng/mL	----
PFPeA	Auto	3.918	80787	1624613	4	0.0088	ng/mL	----
PFBS_1	M	3.933	315	984179	16	0.0016	ng/mL	----
PFBS-13C	Auto	3.973	984179	4801843	26	5.2142	ng/mL	----
PFBS-13C_IS	Auto	3.973	984179	984179	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.181	5931833	5931833	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.181	5931833	4801843	26	5.5243	ng/mL	----
PFHxA	M	4.179	10053	5931833	6	0.0110	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1087823	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.247	1087823	1087823	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.247	1087823	4801843	26	5.3989	ng/mL	----
4_2-FTS-13C_IS	Auto	4.155	555272	555272	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.155	555272	4801843	26	5.1610	ng/mL	----
4_2-FTS_1	M	4.143	26	555272	5	0.0002	ng/mL	----
PFHpA	Auto	4.365	4226	4250204	8	0.0142	ng/mL	----
PFHpA-13C_IS	Auto	4.361	4250204	4250204	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.361	4250204	4801843	26	4.8185	ng/mL	----
PFHxS-18O_IS	Auto	4.361	537547	537547	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.361	537547	4801843	26	5.0310	ng/mL	----
PFHxS_1	Auto	4.347	951	537547	7	0.0089	ng/mL	----
6_2-FTS-13C	Auto	4.524	393915	4801843	26	5.2044	ng/mL	----
6_2-FTS-13C_IS	Auto	4.524	393915	393915	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.530	470	393915	10	0.0060	ng/mL	----
PFHpS_1	ND(W/B)	----	----	537547	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.533	5283033	5283033	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.533	5283033	4801843	26	5.2569	ng/mL	----
PFOA	Auto	4.534	8613	5283033	9	0.0054	ng/mL	----
PFOS_1	Auto	4.687	498	636868	13	0.0055	ng/mL	----
PFOS-13C_IS	Auto	4.690	636868	636868	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.690	636868	4801843	26	5.2867	ng/mL	----
PFNA-13C_IS	Auto	4.702	4363579	4363579	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.702	4363579	4801843	26	5.0343	ng/mL	----
PFNA	M	4.688	1380	4363579	11	0.0073	ng/mL	----
PFDA-13C_IS	Auto	4.887	4183936	4183936	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.887	4183936	4801843	26	5.2099	ng/mL	----
PFDA	M	4.887	2007	4183936	12	0.0028	ng/mL	----
8_2-FTS-13C_IS	Auto	4.885	301006	301006	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.885	301006	4801843	26	5.0443	ng/mL	----
8_2-FTS_1	M	4.883	32	301006	15	0.0007	ng/mL	----
PFDS_1	ND(W/B)	----	----	636868	13	----	ng/mL	----
PFUnA	Auto	5.068	9408	4111751	14	0.0089	ng/mL	----
PFUnA-13C_IS	Auto	5.070	4111751	4111751	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.070	4111751	4801843	26	5.2640	ng/mL	----
PFDoA	Auto	5.241	2393	5792394	17	0.0065	ng/mL	----
PFDoA-13C	Auto	5.250	5792394	4801843	26	5.4253	ng/mL	----
PFDoA-13C_IS	Auto	5.250	5792394	5792394	17	5.0000	ng/mL	----
10_2-FtS_1	M	5.252	37	301006	15	0.0008	ng/mL	----
PFTrDA	Auto	5.417	2528	4511655	22	0.0067	ng/mL	----
PFTeDA	Auto	5.572	31203	4511655	22	0.0073	ng/mL	----
PFTeDA-13C	Auto	5.572	4511655	4801843	26	5.3646	ng/mL	----
PFTeDA-13C_IS	Auto	5.572	4511655	4511655	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.220	1764345	1764345	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.220	1764345	4801843	26	5.2798	ng/mL	----
FOSA	M	5.224	1576	1764345	18	0.0033	ng/mL	----
N-MeFOSAA	M	4.988	3068	974188	19	0.0250	ng/mL	----
N-MeFOSAA-d3	Auto	4.991	974188	4801843	26	5.4718	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.991	974188	974188	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.611	604622	604622	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.611	604622	4801843	26	5.1256	ng/mL	----
N-MeFOSA	M	5.609	1349	604622	1	0.0087	ng/mL	----
N-MeFOSE-d7	Auto	5.584	731109	4801843	26	5.1227	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.584	731109	731109	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	731109	20	----	ng/mL	----

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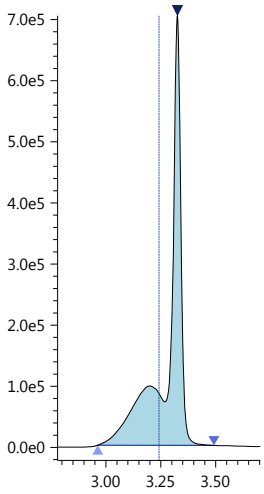
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	ND(W/B)	----	----	902360	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.087	902360	902360	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.087	902360	4801843	26	5.2801	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.749	920646	920646	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.749	920646	4801843	26	4.9984	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	920646	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.716	833616	833616	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.716	833616	4801843	26	5.2986	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	833616	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.069	4801843	4801843	26	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	984179	16	----	ng/mL	----
PFNS	ND(W/B)	----	----	636868	13	----	ng/mL	----

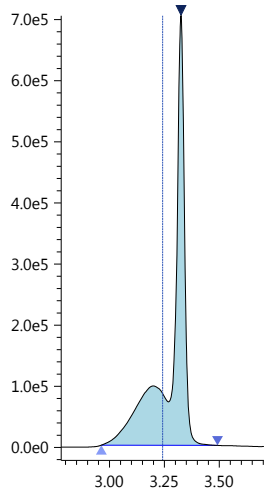
PFBA-13C_IS

Conc 5.0000
RT 3.325 Area 2679474
ISTD 216.90>172.15 (-) 7.06e5



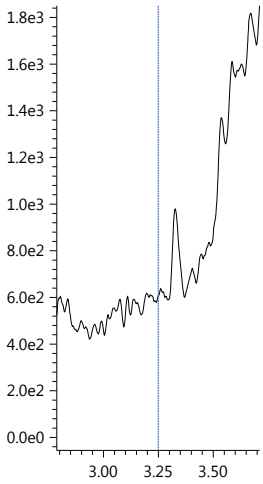
PFBA-13C

Conc 5.1696
RT 3.325 Area 2679474
Q 216.90>172.15 (-) 7.06e5



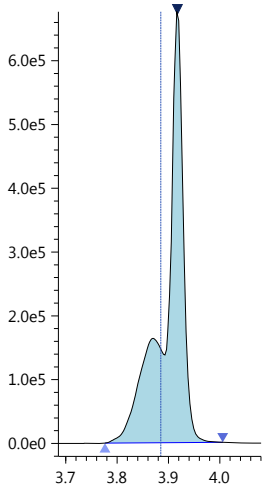
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.85e3



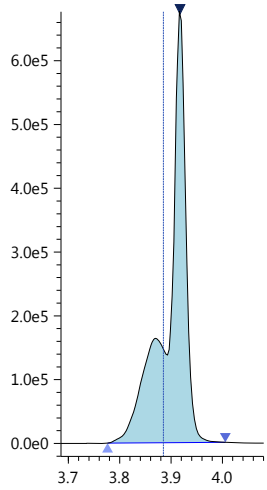
PFPeA-13C_IS

Conc 5.0000
RT 3.917 Area 1624613
ISTD 267.90>223.00 (-) 6.77e5



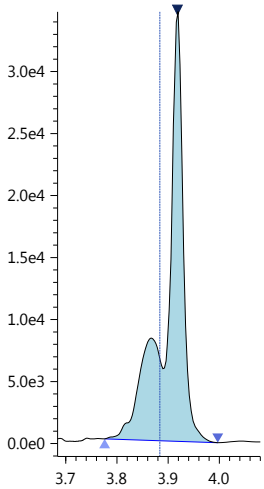
PFPeA-13C

Conc 5.1479
RT 3.917 Area 1624613
Q 267.90>223.00 (-) 6.77e5



PFPeA

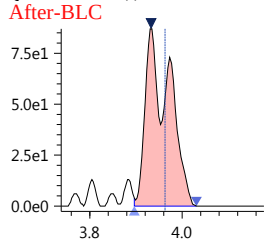
Conc 0.0088
RT 3.918 Area 80787
Q 263.05>219.10 (-) 3.48e4



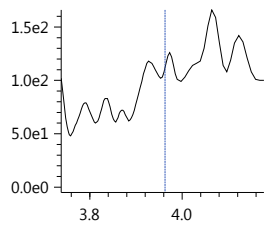
PFBS_1

Conc 0.0016
RT 3.933 Area 315
R#1 39.22 (0.00)
Q 299.00>80.00 (-) 8.70e1

After-BLC

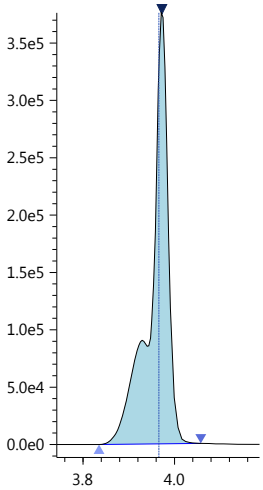


R1 298.80>99.00 (-) 1.66e2



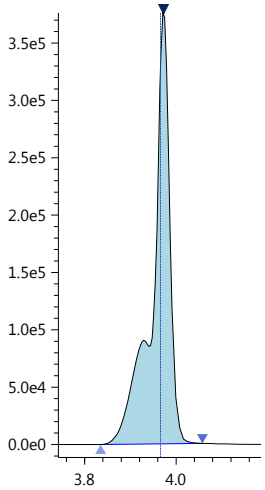
PFBS-13C

Conc 5.2142
RT 3.973 Area 984179
Q 301.80>80.00 (-) 3.76e5



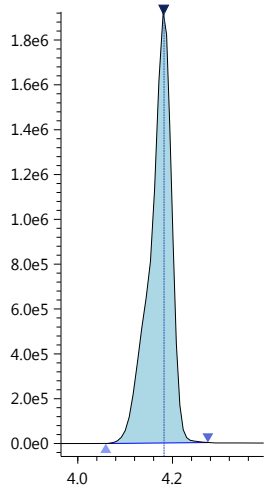
PFBS-13C_IS

Conc 5.0000
RT 3.973 Area 984179
ISTD 301.80>80.00 (-) 3.76e5



PFHxA-13C_IS

Conc 5.0000
RT 4.181 Area 5931833
ISTD 314.90>270.10 (-) 1.93e6



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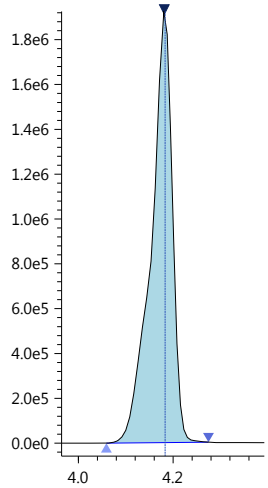
PFHxA-13C

Conc 5.5243
RT 4.181 Area 5931833

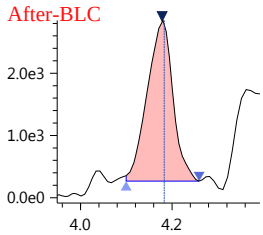
Q 314.90>270.10 (-) 1.93e6



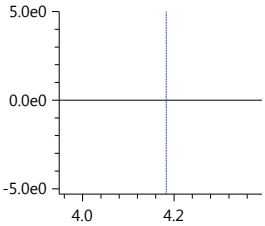
PFHxA

Conc 0.0110
RT 4.179 Area 10053
R#1 0.00 (0.00)

Q 313.00>269.00 (-) 2.85e3



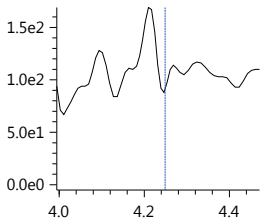
R1 313.00>119.10 (-) 0.00e0



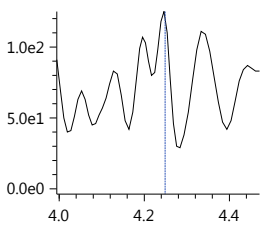
HPFO_DA

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

Q 329.00>169.00 (-) 1.69e2



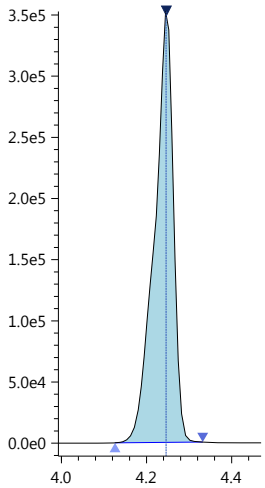
R1 329.00>285.10 (-) 1.25e2



HFPO_DA-13C_IS

Conc 5.0000
RT 4.247 Area 1087823

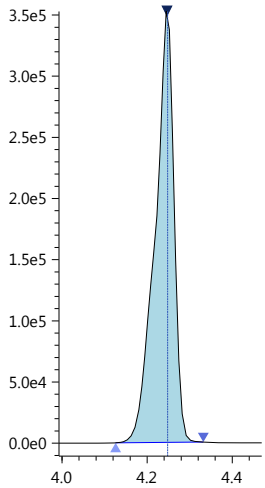
ISTD 332.00>286.80 (-) 3.53e5



HFPO_DA-13C

Conc 5.3989
RT 4.247 Area 1087823

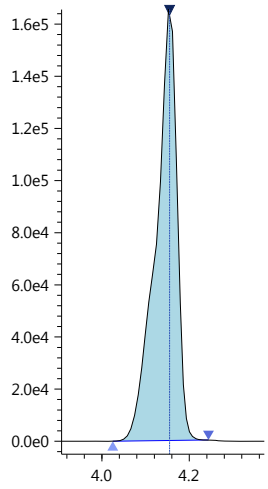
Q 332.00>286.80 (-) 3.53e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.155 Area 555272

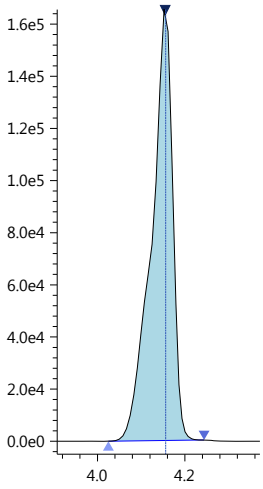
ISTD 328.80>309.05 (-) 1.66e5



4_2-FTS-13C

Conc 5.1610
RT 4.155 Area 555272

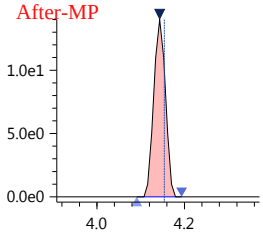
Q 328.80>309.05 (-) 1.66e5



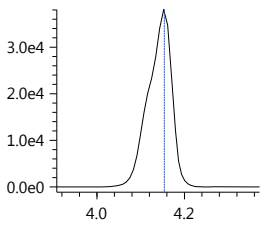
4_2-FTS_1

Conc 0.0002
RT 4.143 Area 26
R#1 229069.20 (0.00)

Q 327.00>307.05 (-) 1.40e1



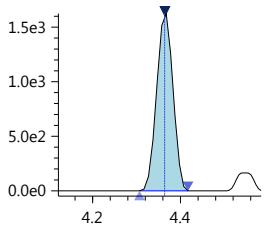
R1 327.00>81.10 (-) 3.81e4



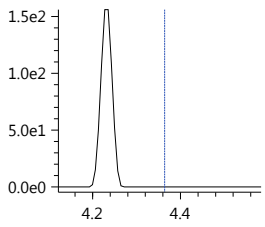
PFHpA

Conc 0.0142
RT 4.365 Area 4226
R#1 0.00 (0.00)

Q 362.90>319.00 (-) 1.63e3



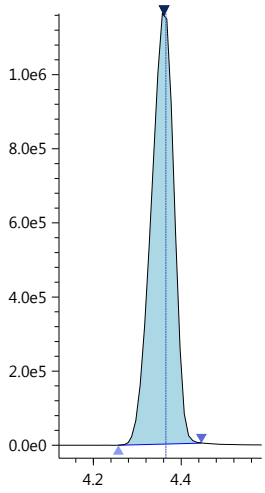
R1 362.90>169.00 (-) 1.56e2



PFHpA-13C_IS

Conc 5.0000
RT 4.361 Area 4250204

ISTD 366.90>322.10 (-) 1.16e6



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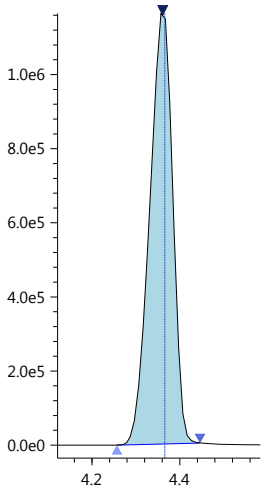
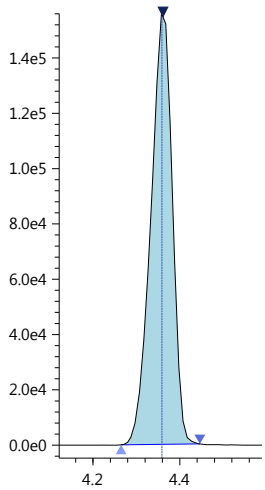
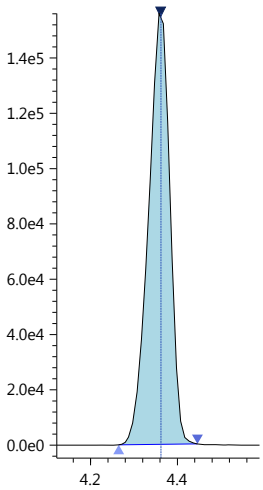
PFHpA-13C
Conc 4.8185
RT 4.361 Area 4250204
Q 366.90>322.10 (-) 1.16e6



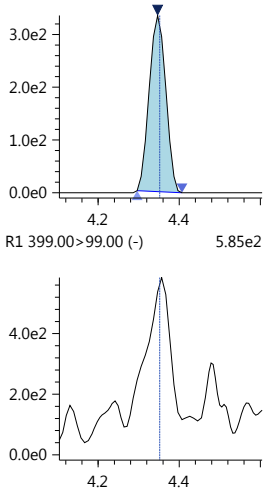
PFHxS-18O_IS
Conc 5.0000
RT 4.361 Area 537547
ISTD 402.70>84.05 (-) 1.56e5



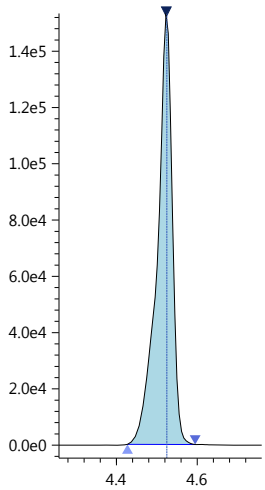
PFHxS-18O
Conc 5.0310
RT 4.361 Area 537547
Q 402.70>84.05 (-) 1.56e5



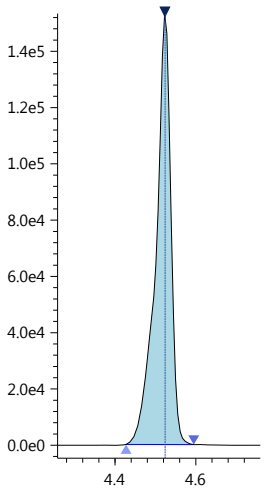
PFHxS_1
Conc 0.0089
RT 4.347 Area 951
R#1 105.52 (0.00)
Q 399.00>80.00 (-) 3.36e2



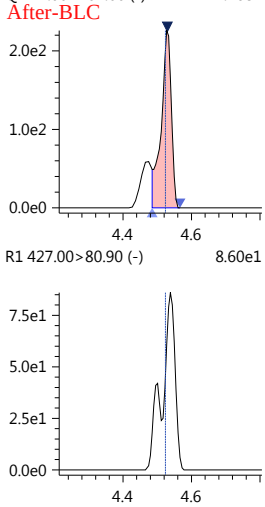
6_2-FTS-13C
Conc 5.2044
RT 4.524 Area 393915
Q 428.90>409.00 (-) 1.53e5



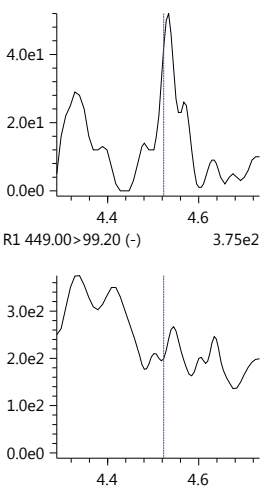
6_2-FTS-13C_IS
Conc 5.0000
RT 4.524 Area 393915
ISTD 428.90>409.00 (-) 1.53e5



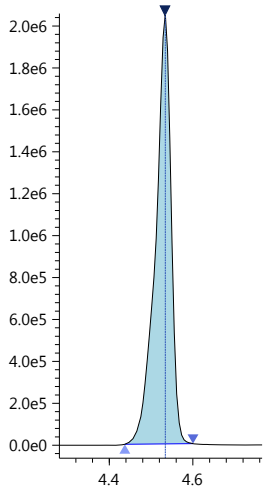
6_2-FTS_1
Conc 0.0060
RT 4.530 Area 470
R#1 24.46 (0.00)
Q 427.00>407.00 (-) 2.26e2
After-BLC



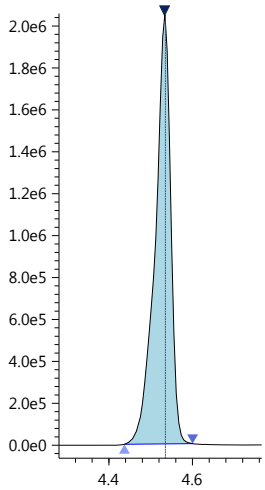
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 5.20e1



PFOA-13C_IS
Conc 5.0000
RT 4.533 Area 5283033
ISTD 416.80>372.05 (-) 2.06e6



PFOA-13C
Conc 5.2569
RT 4.533 Area 5283033
Q 416.80>372.05 (-) 2.06e6



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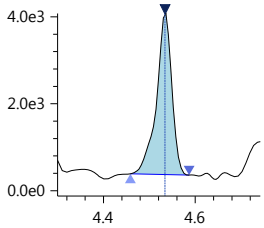
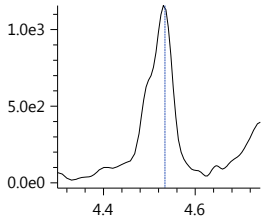
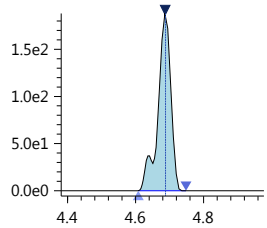
PFOA
Conc 0.0054
RT 4.534 Area 8613
R#1 26.06 (0.00)
Q 413.00>369.00 (-) 4.08e3



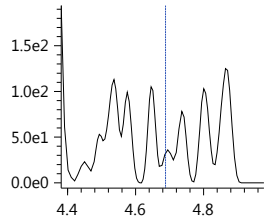
R1 413.00>169.10 (-) 1.16e3



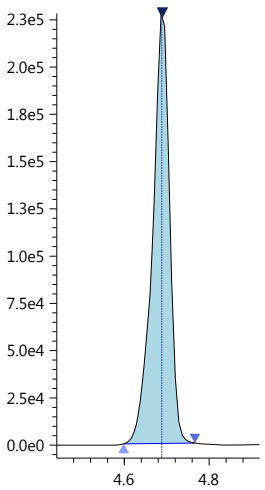
PFOS_1
Conc 0.0055
RT 4.687 Area 498
R#1 0.00 (0.00)
Q 499.00>80.00 (-) 1.88e2



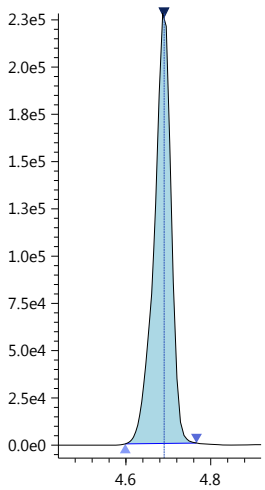
R1 499.00>99.00 (-) 1.94e2



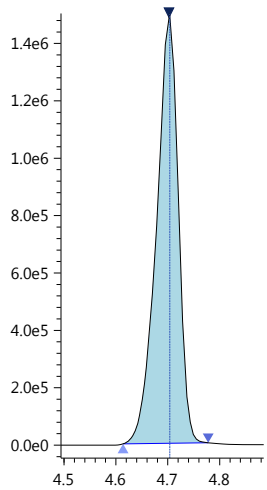
PFOS-13C_IS
Conc 5.0000
RT 4.690 Area 636868
ISTD 502.80>80.05 (-) 2.28e5



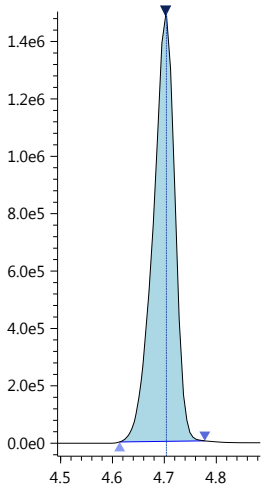
PFOS-13C
Conc 5.2867
RT 4.690 Area 636868
Q 502.80>80.05 (-) 2.28e5



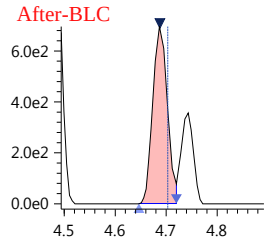
PFNA-13C_IS
Conc 5.0000
RT 4.702 Area 4363579
ISTD 467.80>423.00 (-) 1.50e6



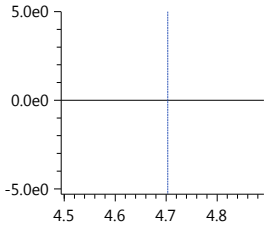
PFNA-13C
Conc 5.0343
RT 4.702 Area 4363579
Q 467.80>423.00 (-) 1.50e6



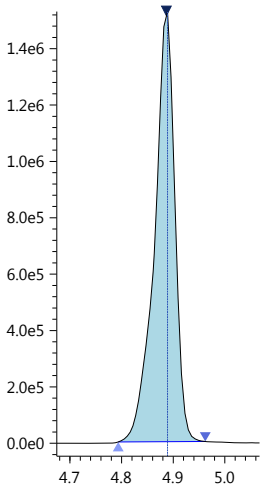
PFNA
Conc 0.0073
RT 4.688 Area 1380
R#1 0.00 (0.00)
Q 463.00>418.90 (-) 6.96e2



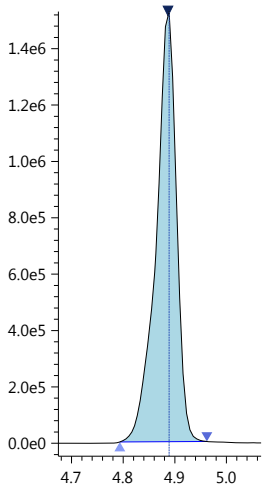
R1 463.00>219.00 (-) 0.00e0



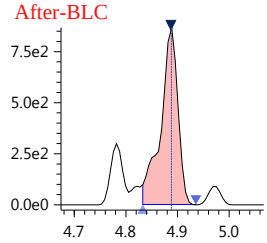
PFDA-13C_IS
Conc 5.0000
RT 4.887 Area 4183936
ISTD 514.80>469.95 (-) 1.53e6



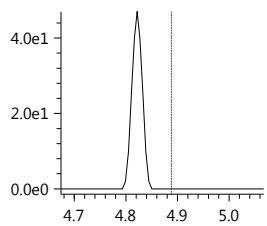
PFDA-13C
Conc 5.2099
RT 4.887 Area 4183936
Q 514.80>469.95 (-) 1.53e6



PFDA
Conc 0.0028
RT 4.887 Area 2007
R#1 0.00 (0.00)
Q 513.00>468.80 (-) 8.68e2



R1 513.00>219.10 (-) 4.70e1



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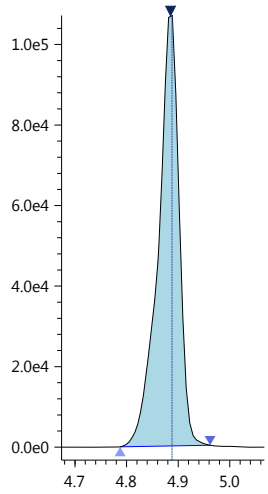
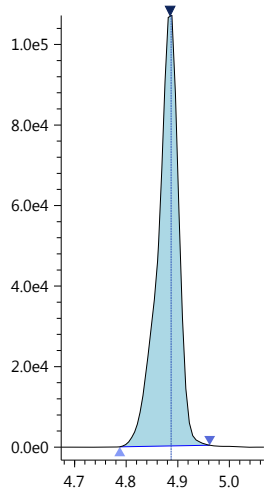
8_2-FTS-13C_IS
Conc 5.0000
RT 4.885 Area 301006
ISTD 528.80>509.00 (-) 1.07e5

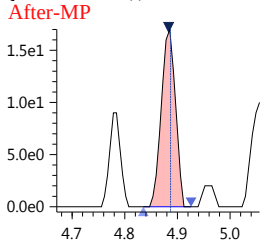


8_2-FTS-13C
Conc 5.0443
RT 4.885 Area 301006
Q 528.80>509.00 (-) 1.07e5

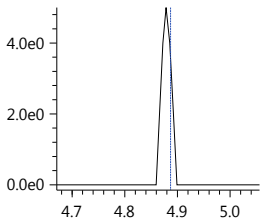


8_2-FTS_1
Conc 0.0007
RT 4.883 Area 32
R#1 33.33 (0.00)
Q 527.10>506.90 (-) 1.70e1

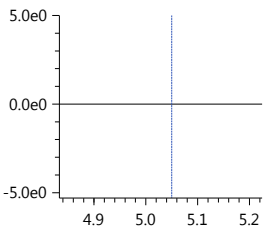
After-MP



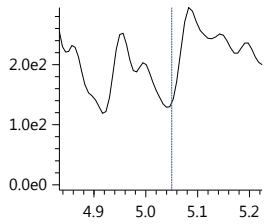
R1 527.20>487.00 (-) 5.00e0



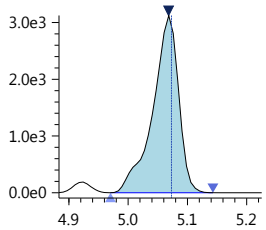
PFDS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 599.00>79.90 (-) 0.00e0



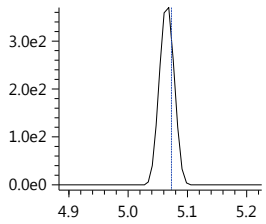
R1 599.00>99.10 (-) 2.95e2



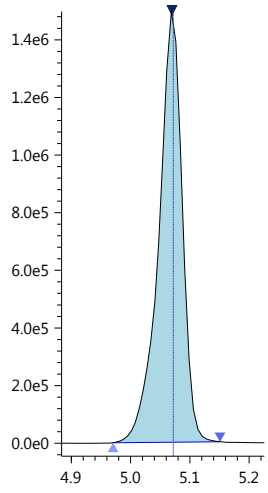
PFUnA
Conc 0.0089
RT 5.068 Area 9408
R#1 12.23 (0.00)
Q 563.00>518.90 (-) 3.13e3



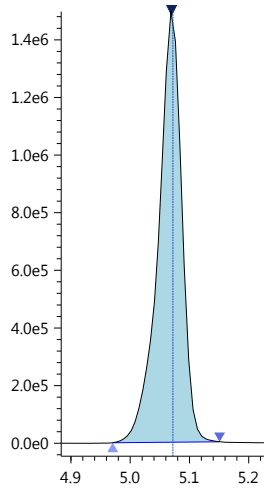
R1 563.00>219.00 (-) 3.70e2



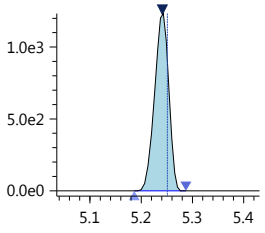
PFUnA-13C_IS
Conc 5.0000
RT 5.070 Area 4111751
ISTD 564.80>519.95 (-) 1.50e6



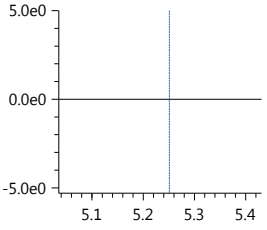
PFUnA-13C
Conc 5.2640
RT 5.070 Area 4111751
Q 564.80>519.95 (-) 1.50e6



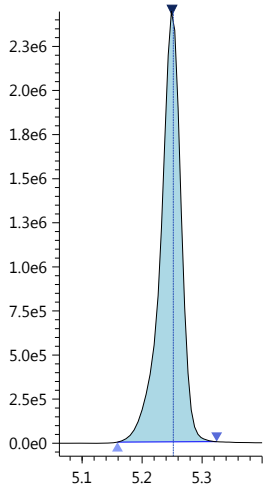
PFDoA
Conc 0.0065
RT 5.241 Area 2393
R#1 0.00 (0.00)
Q 613.05>569.00 (-) 1.23e3



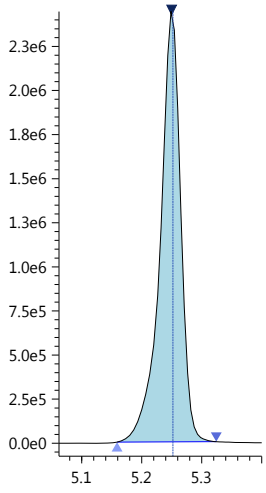
R1 613.05>169.00 (-) 0.00e0



PFDoA-13C
Conc 5.4253
RT 5.250 Area 5792394
Q 614.80>569.95 (-) 2.45e6



PFDoA-13C_IS
Conc 5.0000
RT 5.250 Area 5792394
ISTD 614.80>569.95 (-) 2.45e6



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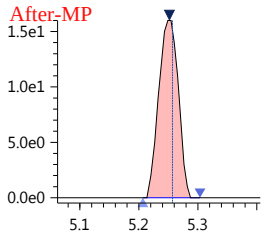
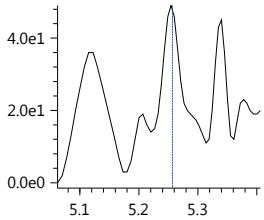
10_2-FtS_1

Conc 0.0008
RT 5.252 Area 37
R#1 164.71 (0.00)

Q 627.00>606.95 (-) 1.60e1



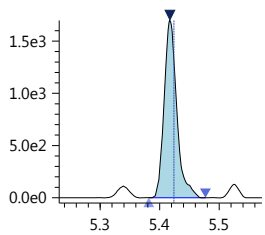
R1 627.00>81.25 (-) 4.90e1



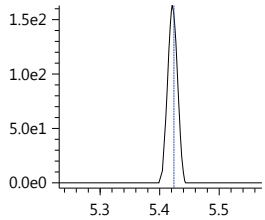
PFTrDA

Conc 0.0067
RT 5.417 Area 2528
R#1 6.33 (0.00)

Q 663.00>618.90 (-) 1.70e3



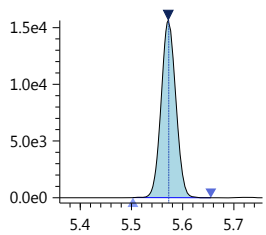
R1 662.90>169.00 (-) 1.63e2



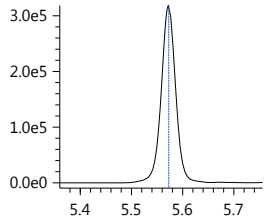
PFTeDA

Conc 0.0073
RT 5.572 Area 31203
R#1 2107.60 (0.00)

Q 713.40>669.00 (-) 1.56e4



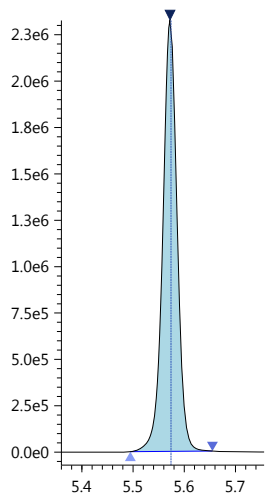
R1 713.40>169.10 (-) 3.18e5



PFTeDA-13C

Conc 5.3646
RT 5.572 Area 4511655

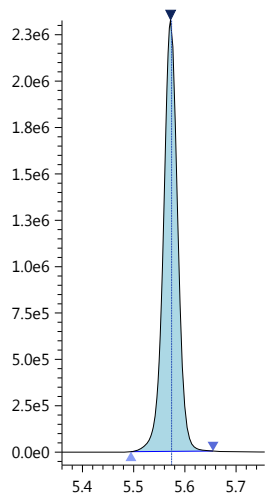
Q 714.70>669.90 (-) 2.33e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.572 Area 4511655

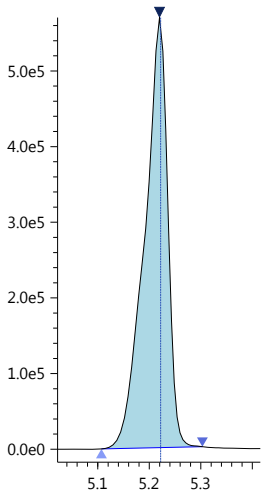
ISTD 714.70>669.90 (-) 2.33e6



FOSA-13C_IS

Conc 5.0000
RT 5.220 Area 1764345

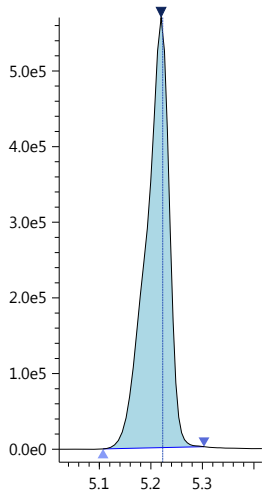
ISTD 506.00>78.05 (-) 5.71e5



FOSA-13C

Conc 5.2798
RT 5.220 Area 1764345

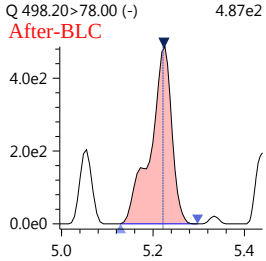
Q 506.00>78.05 (-) 5.71e5



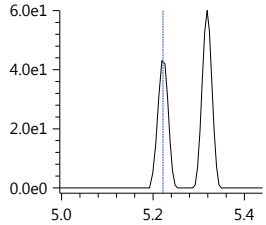
FOSA

Conc 0.0033
RT 5.224 Area 1576
R#1 9.52 (0.00)

Q 498.20>78.00 (-) 4.87e2



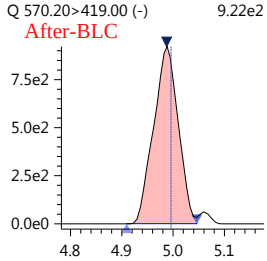
R1 498.20>64.10 (-) 6.00e1



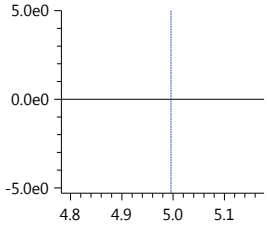
N-MeFOSAA

Conc 0.0250
RT 4.988 Area 3068
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 9.22e2



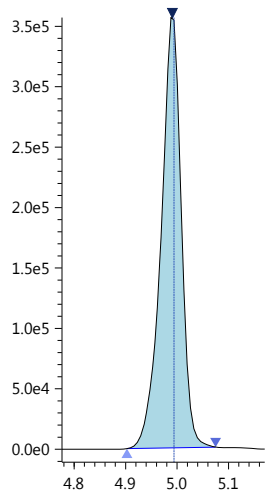
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 5.4718
RT 4.991 Area 974188

Q 572.80>419.05 (-) 3.57e5



Insight Report

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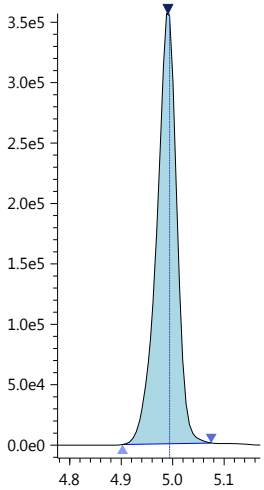
N-MeFOSAA-d3_IS

Conc 5.0000
RT 4.991 Area 974188

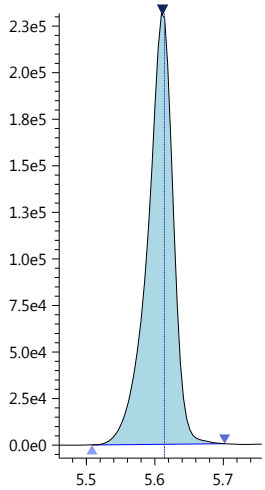
ISTD 572.80>419.05 (-) 3.57e5



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.611 Area 604622

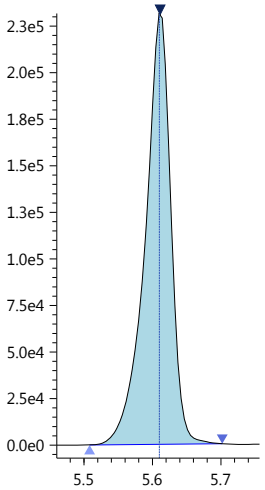
ISTD 514.90>168.90 (-) 2.32e5



N-MeFOSA-d3

Conc 5.1256
RT 5.611 Area 604622

Q 514.90>168.90 (-) 2.32e5

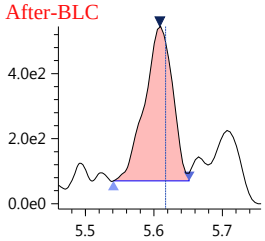


N-MeFOSA

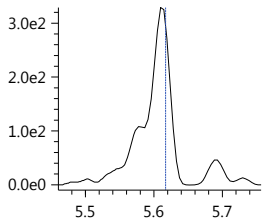
Conc 0.0087
RT 5.609 Area 1349
R#1 58.80 (0.00)

Q 512.00>169.10 (-) 5.45e2

After-BLC



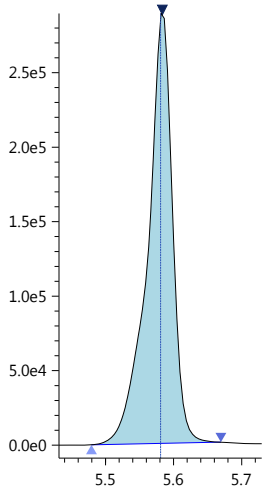
R1 512.00>219.00 (-) 3.29e2



N-MeFOSE-d7

Conc 5.1227
RT 5.584 Area 731109

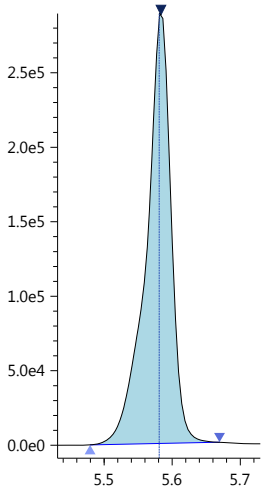
Q 622.70>59.10 (-) 2.90e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.584 Area 731109

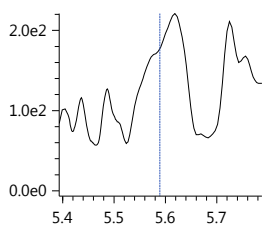
ISTD 622.70>59.10 (-) 2.90e5



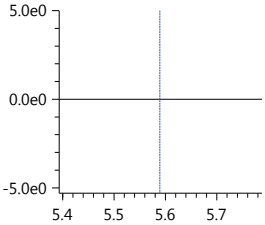
N-MeFOSE

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

Q 616.00>59.00 (-) 2.21e2



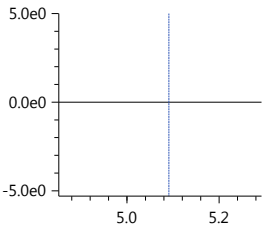
R1 556.00>121.20 (-) 0.00e0



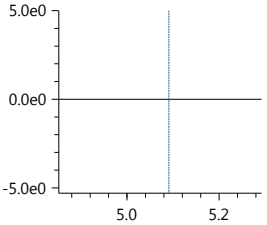
N-EtFOSAA

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

Q 584.20>418.95 (-) 0.00e0



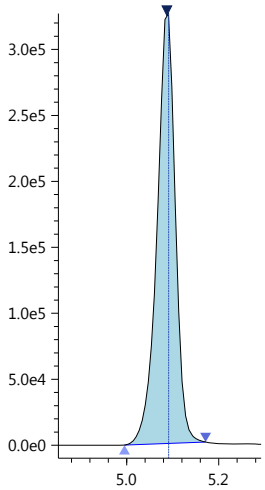
R1 584.20>526.10 (-) 0.00e0



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.087 Area 902360

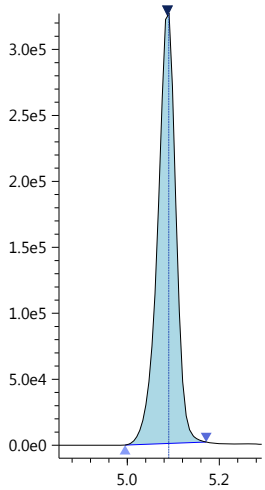
ISTD 588.80>419.00 (-) 3.27e5



N-EtFOSAA-d5

Conc 5.2801
RT 5.087 Area 902360

Q 588.80>419.00 (-) 3.27e5



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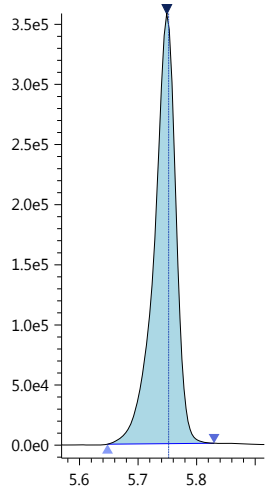
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.749 Area 920646

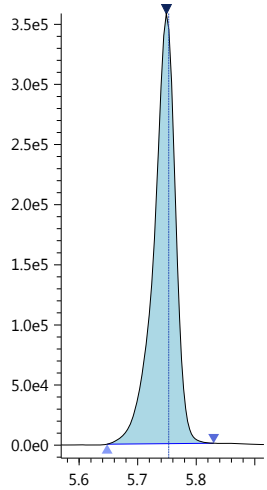
ISTD 530.90>169.15 (-) 3.59e5



N-EtFOSA-d9

Conc 4.9984
RT 5.749 Area 920646

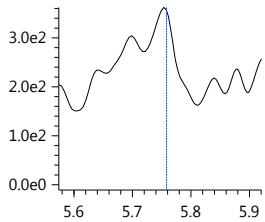
Q 530.90>169.15 (-) 3.59e5



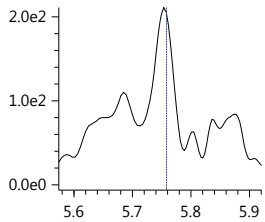
N-EtFOSA

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

Q 526.90>169.10 (-) 3.62e2



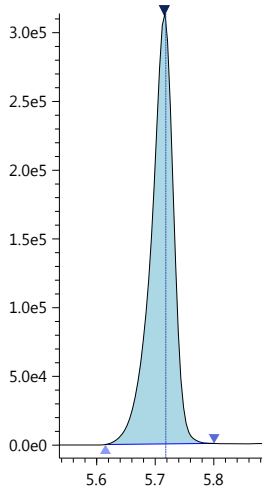
R1 526.90>219.00 (-) 2.11e2



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.716 Area 833616

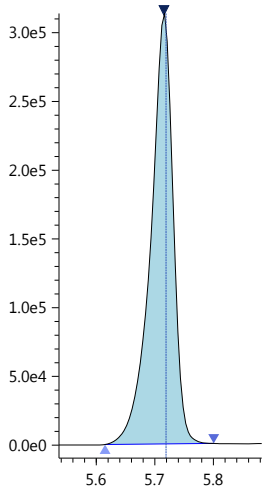
ISTD 638.70>59.10 (-) 3.14e5



N-EtFOSE-d9

Conc 5.2986
RT 5.716 Area 833616

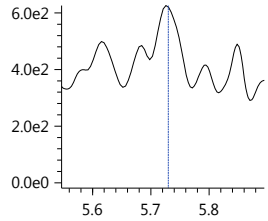
Q 638.70>59.10 (-) 3.14e5



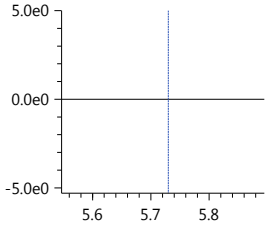
N-EtFOSE

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

Q 630.00>58.90 (-) 6.26e2



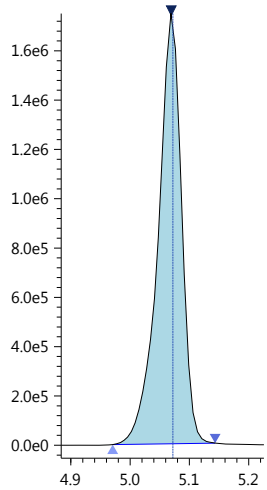
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.069 Area 4801843

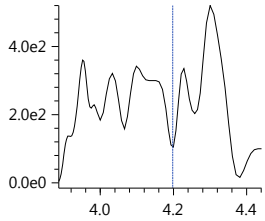
ISTD 570.00>525.00 (-) 1.75e6



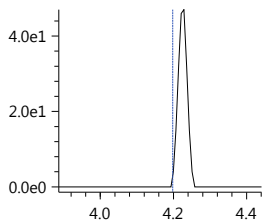
PFPeS

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

Q 349.00>99.00 (-) 5.20e2



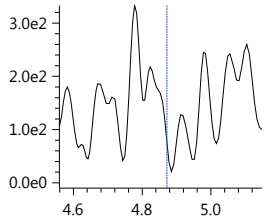
R1 349.00>79.95 (-) 4.70e1



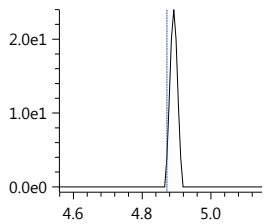
PFNS

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

Q 549.00>99.00 (-) 3.33e2



R1 549.00>79.95 (-) 2.40e1



Insight Report

Printed at 1/21/2019 9:31:25 AM

190118_032

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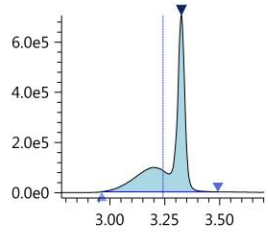
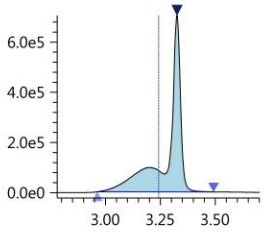
Date acquired: 1/18/2019 7:21:15 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_032.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

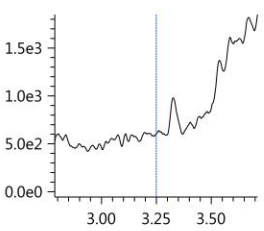
PFBA-13C_IS
Conc 5.0000
RT 3.325 Area 2679474
ISTD 216.90>172.15 (-) 7.06e5



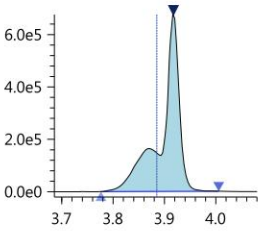
PFBA-13C
Conc 5.1696
RT 3.325 Area 2679474
Q 216.90>172.15 (-) 7.06e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.85e3



PFPeA-13C_IS
Conc 5.0000
RT 3.917 Area 1624613
ISTD 267.90>223.00 (-) 6.77e5



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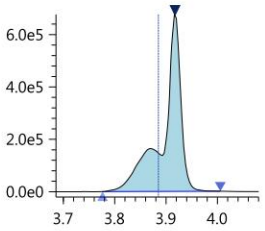
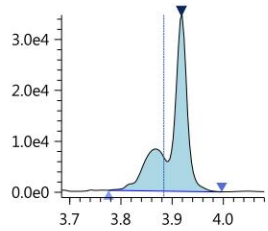
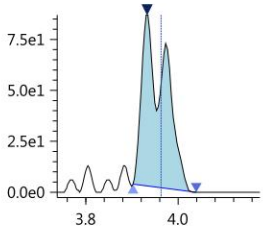
RT 3.917 Area 1624613
Q 267.90>223.00 (-) 6.77e5



PFPeA
Conc 0.0216
RT 3.918 Area 80787
Q 263.05>219.10 (-) 3.48e4



PFBS_1
Conc 0.0003
RT 3.933 Area 297
Q 299.00>80.00 (-) 8.70e1



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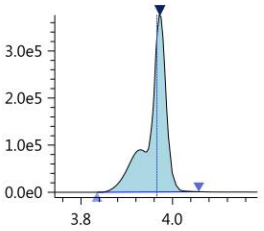
Conc 5.2142
RT 3.973 Area 984179
Q 301.80>80.00 (-) 3.76e5



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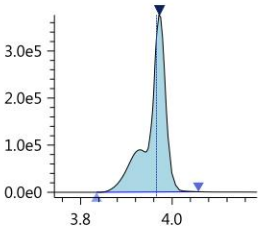
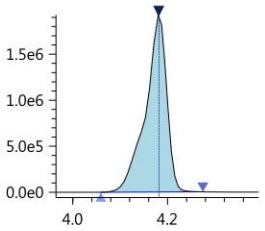
RT 3.973 Area 984179
ISTD 301.80>80.00 (-) 3.76e5



PFHxA-13C_IS
Conc 5.0000
RT 4.181 Area 5931833
ISTD 314.90>270.10 (-) 1.93e6



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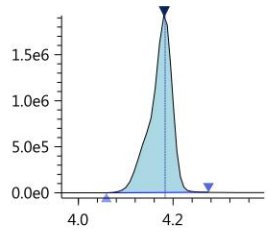
RT 4.181 Area 5931833
Q 314.90>270.10 (-) 1.93e6



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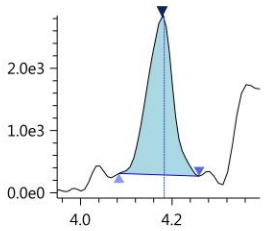
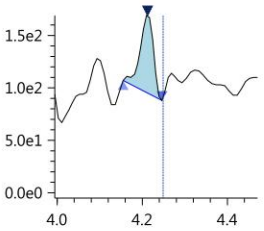
Conc 0.0020
RT 4.179 Area 9889
Q 313.00>269.00 (-) 2.85e3



HPFO_DA
Conc 0.0002
RT 4.212 Area 161
Q 329.00>169.00 (-) 1.69e2



HFPO_DA-13C_IS
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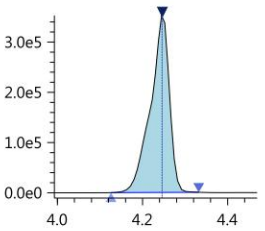
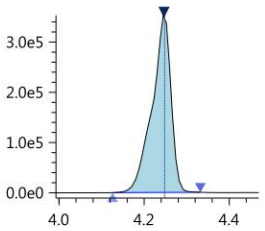
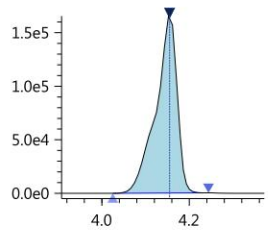
RT 4.247 Area 1087823
ISTD 332.00>286.80 (-) 3.53e5



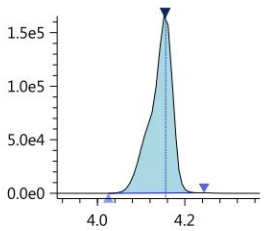
HFPO_DA-13C
Conc 5.3989
RT 4.247 Area 1087823
Q 332.00>286.80 (-) 3.53e5



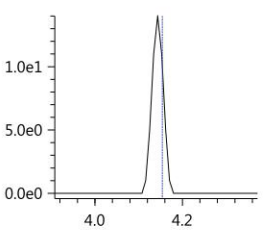
4_2-FTS-13C_IS
Conc 5.0000
RT 4.155 Area 555272
ISTD 328.80>309.05 (-) 1.66e5



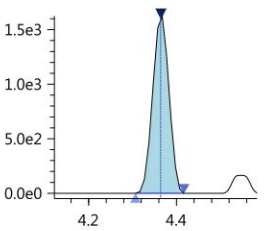
4_2-FTS-13C
Conc 5.1610
RT 4.155 Area 555272
Q 328.80>309.05 (-) 1.66e5



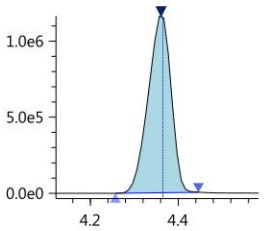
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 1.40e1



PFHpA
Conc 0.0012
RT 4.365 Area 4226
Q 362.90>319.00 (-) 1.63e3



PFHpA-13C_IS
Conc 5.0000
RT 4.361 Area 4250204
ISTD 366.90>322.10 (-) 1.16e6



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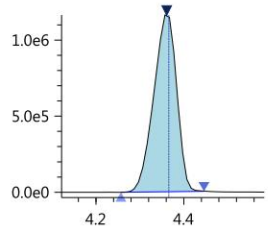
PFHpA-13C
Conc 4.8185
RT 4.361 Area 4250204
Q 366.90>322.10 (-) 1.16e6



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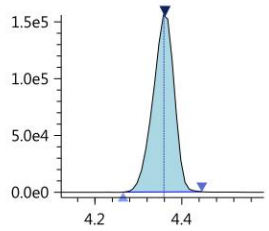
Conc 5.0000
RT 4.361 Area 537547
ISTD 402.70>84.05 (-) 1.56e5



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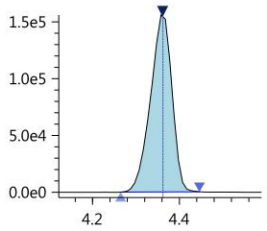
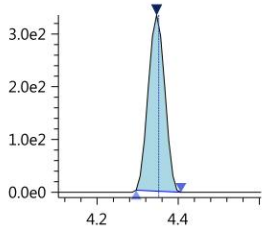
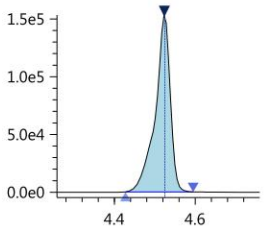
Conc 5.0310
RT 4.361 Area 537547
Q 402.70>84.05 (-) 1.56e5



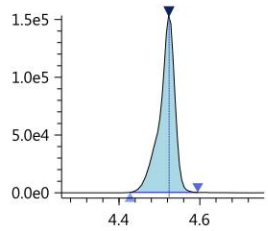
PFHxS_1
Conc 0.0020
RT 4.347 Area 951
Q 399.00>80.00 (-) 3.36e2



6_2-FTS-13C
Conc 5.2044
RT 4.524 Area 393915
Q 428.90>409.00 (-) 1.53e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.524 Area 393915
ISTD 428.90>409.00 (-) 1.53e5



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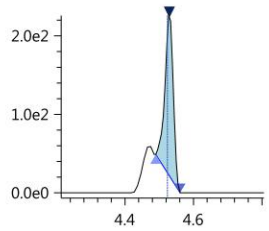
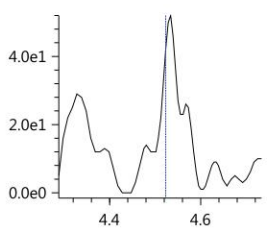
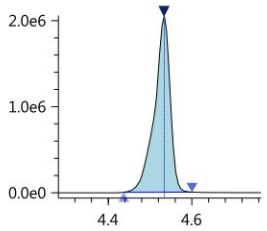
Conc 0.0011
RT 4.530 Area 351
Q 427.00>407.00 (-) 2.26e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 5.20e1



PFOA-13C_IS
Conc 5.0000
RT 4.533 Area 5283033
ISTD 416.80>372.05 (-) 2.06e6



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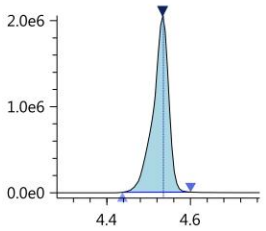
Conc 5.2569
RT 4.533 Area 5283033
Q 416.80>372.05 (-) 2.06e6



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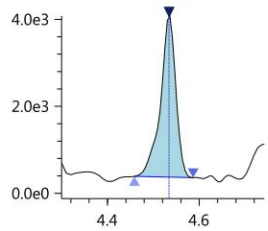
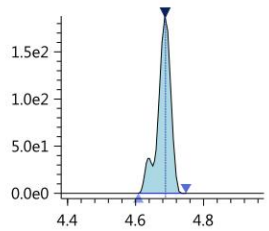
RT 4.534 Area 8613
Q 413.00>369.00 (-) 4.08e3



PFOS_1
Conc 0.0012
RT 4.687 Area 498
Q 499.00>80.00 (-) 1.88e2



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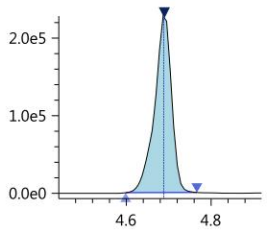
Conc 5.0000
RT 4.690 Area 636868
ISTD 502.80>80.05 (-) 2.28e5



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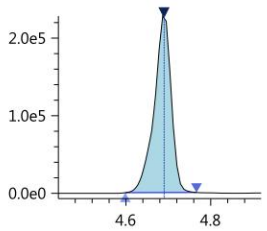
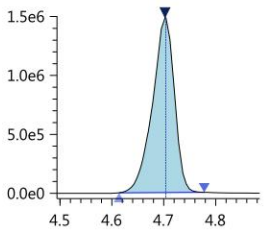
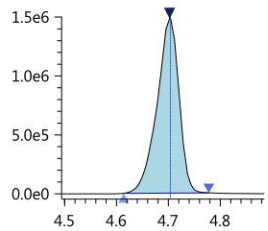
RT 4.690 Area 636868
Q 502.80>80.05 (-) 2.28e5



PFNA-13C_IS
Conc 5.0000
RT 4.702 Area 4363579
ISTD 467.80>423.00 (-) 1.50e6



PFNA-13C
Conc 5.0343
RT 4.702 Area 4363579
Q 467.80>423.00 (-) 1.50e6



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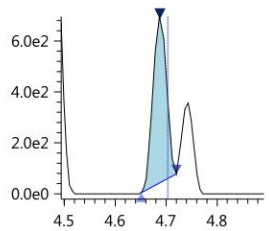
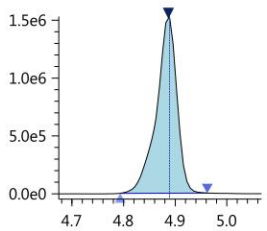
Conc 0.0004
RT 4.688 Area 1215
Q 463.00>418.90 (-) 6.96e2



PFDA-13C_IS
Conc 5.0000
RT 4.887 Area 4183936
ISTD 514.80>469.95 (-) 1.53e6



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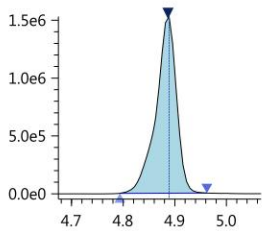
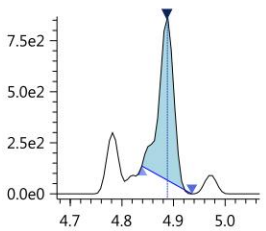
RT 4.887 Area 4183936
Q 514.80>469.95 (-) 1.53e6



PFDA
Conc 0.0005
RT 4.887 Area 1575
Q 513.00>468.80 (-) 8.68e2



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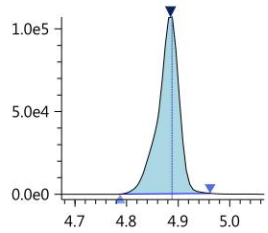
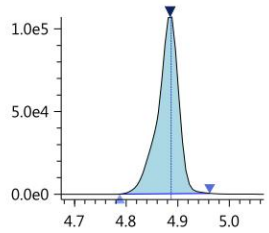
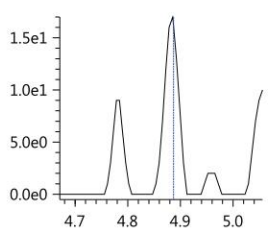
8_2-FTS-13C_IS
Conc 5.0000
RT 4.885 Area 301006
ISTD 528.80>509.00 (-) 1.07e5



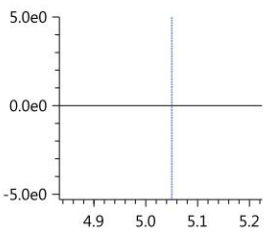
8_2-FTS-13C
Conc 5.0443
RT 4.885 Area 301006
Q 528.80>509.00 (-) 1.07e5



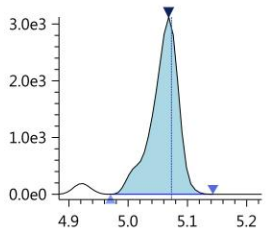
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.70e1



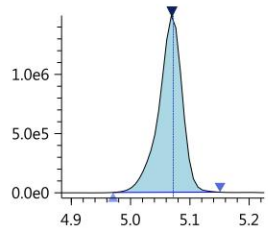
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0031
RT 5.068 Area 9408
Q 563.00>518.90 (-) 3.13e3



PFUnA-13C_IS
Conc 5.0000
RT 5.070 Area 4111751
ISTD 564.80>519.95 (-) 1.50e6



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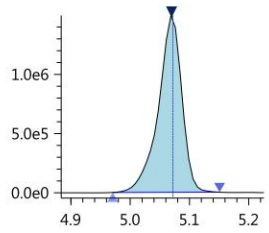
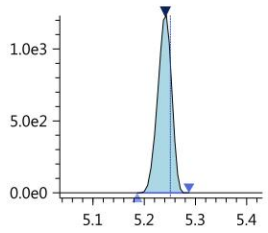
Q 564.80>519.95 (-) 1.50e6



PFDoA
Conc 0.0008
RT 5.241 Area 2393
Q 613.05>569.00 (-) 1.23e3



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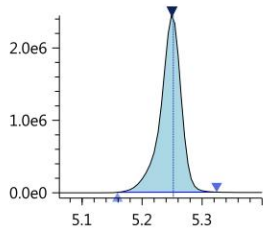
Conc 5.4253
RT 5.250 Area 5792394
Q 614.80>569.95 (-) 2.45e6



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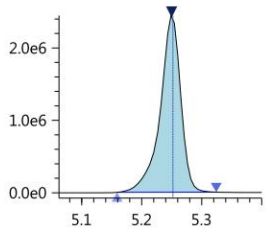
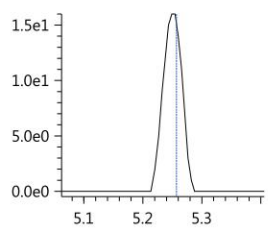
RT 5.250 Area 5792394
ISTD 614.80>569.95 (-) 2.45e6



10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.60e1



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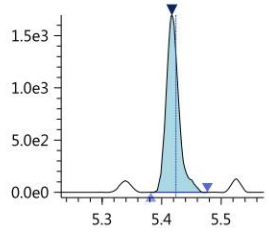
Conc 0.0007
RT 5.417 Area 2528
Q 663.00>618.90 (-) 1.70e3



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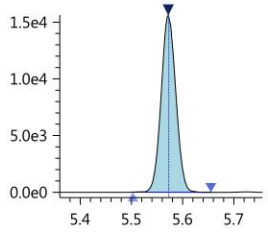
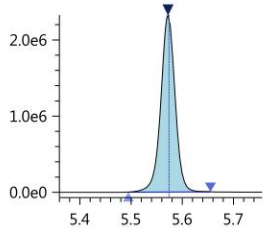
Conc 0.0220
RT 5.572 Area 31203
Q 713.40>669.00 (-) 1.56e4



PFTeDA-13C
Conc 5.3646
RT 5.572 Area 4511655
Q 714.70>669.90 (-) 2.33e6



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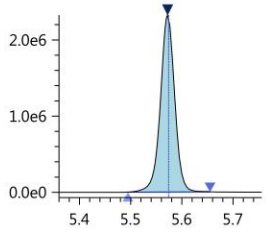
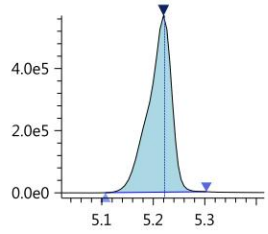
Conc 5.0000
RT 5.572 Area 4511655
ISTD 714.70>669.90 (-) 2.33e6



FOSA-13C_IS
Conc 5.0000
RT 5.220 Area 1764345
ISTD 506.00>78.05 (-) 5.71e5



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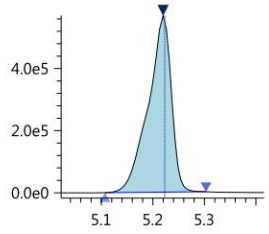
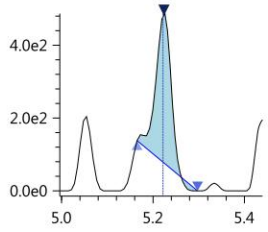
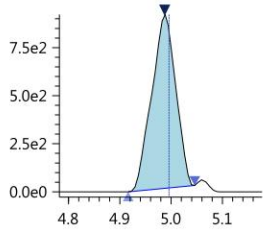
Conc 5.2798
RT 5.220 Area 1764345
Q 506.00>78.05 (-) 5.71e5



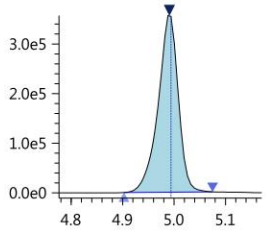
FOSA
Conc 0.0004
RT 5.224 Area 922
Q 498.20>78.00 (-) 4.87e2



N-MeFOSAA
Conc 0.0055
RT 4.988 Area 2948
Q 570.20>419.00 (-) 9.22e2



N-MeFOSAA-d3
Conc 5.4718
RT 4.991 Area 974188
Q 572.80>419.05 (-) 3.57e5



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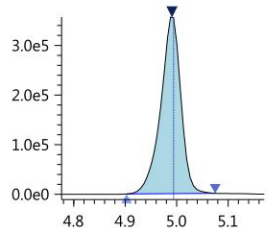
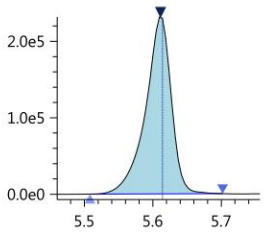
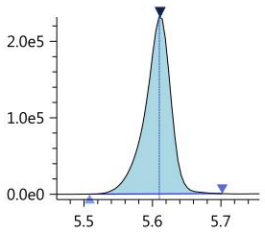
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.991 Area 974188
ISTD 572.80>419.05 (-) 3.57e5



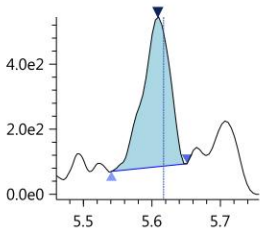
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.611 Area 604622
ISTD 514.90>168.90 (-) 2.32e5



N-MeFOSA-d3
Conc 5.1256
RT 5.611 Area 604622
Q 514.90>168.90 (-) 2.32e5



N-MeFOSA
Conc 0.0018
RT 5.609 Area 1270
Q 512.00>169.10 (-) 5.45e2



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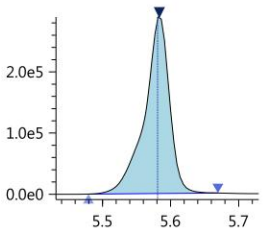
Conc 5.1227
RT 5.584 Area 731109
Q 622.70>59.10 (-) 2.90e5



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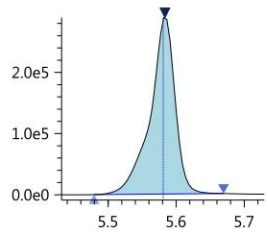
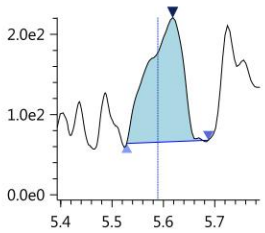
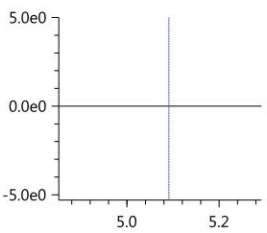
Conc 5.0000
RT 5.584 Area 731109
ISTD 622.70>59.10 (-) 2.90e5



N-MeFOSE
Conc 0.0008
RT 5.618 Area 722
Q 616.00>59.00 (-) 2.21e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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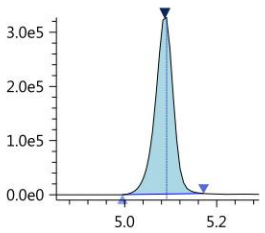
Conc 5.0000
RT 5.087 Area 902360
ISTD 588.80>419.00 (-) 3.27e5



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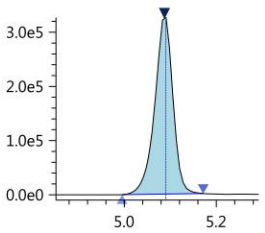
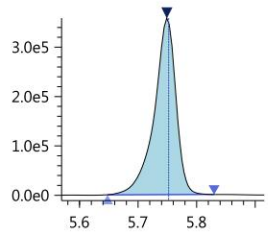
RT 5.087 Area 902360
Q 588.80>419.00 (-) 3.27e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.749 Area 920646
ISTD 530.90>169.15 (-) 3.59e5



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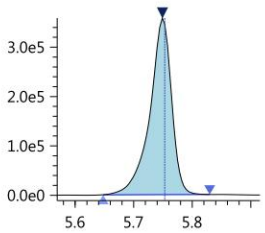
Conc 4.9984
RT 5.749 Area 920646
Q 530.90>169.15 (-) 3.59e5



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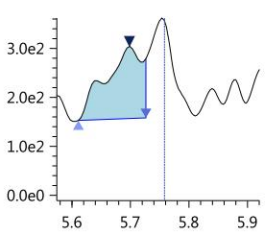
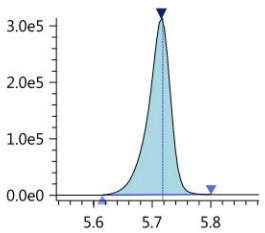
Conc 0.0046
RT 5.698 Area 628
Q 526.90>169.10 (-) 3.62e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.716 Area 833616
ISTD 638.70>59.10 (-) 3.14e5



N-EtFOSE-d9
Conc 5.2986
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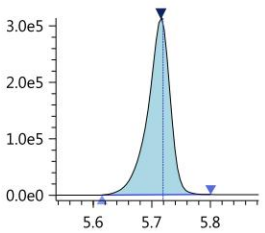
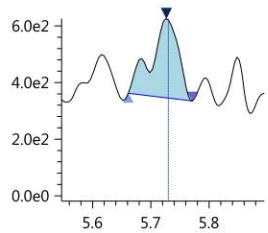
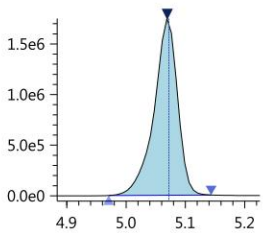
Q 638.70>59.10 (-) 3.14e5



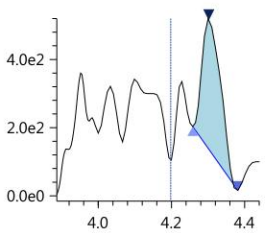
N-EtFOSE
Conc 0.0012
RT 5.727 Area 909
Q 630.00>58.90 (-) 6.26e2



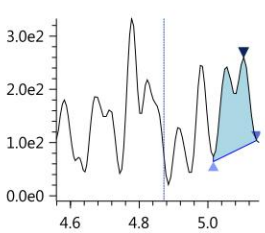
13C7-PFUnDA_IS
Conc 5.0000
RT 5.069 Area 4801843
ISTD 570.00>525.00 (-) 1.75e6



PFPeS
Conc 0.0033
RT 4.302 Area 1347
Q 349.00>99.00 (-) 5.20e2



PFNS
Conc 0.0023
RT 5.104 Area 796
Q 549.00>99.00 (-) 3.33e2



Insight Report

Printed at 1/21/2019 10:49:39 AM

190118_033

Sample ID: T-PFOA
Date acquired: 1/18/2019 7:31:42 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_033.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.235	1336	1336	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.235	1336	511	26	24.2161	ng/mL	----
PFBA	ND(W/B)	----	----	1336	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.886	434	434	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.886	434	511	26	12.9082	ng/mL	----
PFPeA	Auto	3.868	2448	434	4	11.2132	ng/mL	----
PFBS_1	Auto	3.943	148	308	16	2.3836	ng/mL	----
PFBS-13C	Auto	4.059	308	511	26	15.3435	ng/mL	----
PFBS-13C_IS	Auto	4.059	308	308	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.200	2417	2417	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.200	2417	511	26	21.1475	ng/mL	----
PFHxA	Auto	4.172	6530	2417	6	14.5817	ng/mL	----
HPFO_DA	Auto	4.247	3469	206	3	82.8723	ng/mL	----
HFPO_DA-13C_IS	Auto	4.173	206	206	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.173	206	511	26	9.6200	ng/mL	----
4_2-FTS-13C_IS	ND(W/B)	----	----	----	5	----	ng/mL	----
4_2-FTS-13C	ND(W/B)	----	----	511	26	----	ng/mL	----
4_2-FTS_1	ND(W/B)	----	----	----	5	----	ng/mL	----
PFHpA	Auto	4.354	10537	814	8	68.9485	ng/mL	----
PFHpA-13C_IS	Auto	4.370	814	814	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.370	814	511	26	8.6658	ng/mL	----
PFHxS-18O_IS	ND(W/B)	----	----	----	7	----	ng/mL	----
PFHxS-18O	ND(W/B)	----	----	511	26	----	ng/mL	----
PFHxS_1	ND(W/B)	----	----	----	7	----	ng/mL	----
6_2-FTS-13C	ND(W/B)	----	----	511	26	----	ng/mL	----
6_2-FTS-13C_IS	ND(W/B)	----	----	----	10	----	ng/mL	----
6_2-FTS_1	ND(W/B)	----	----	----	10	----	ng/mL	----
PFHpS_1	ND(W/B)	----	----	----	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.486	942	942	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.486	942	511	26	8.8055	ng/mL	----
PFOA	Auto	4.529	739819	942	9	4638.5512	ng/mL	----
PFOS_1	ND(W/B)	----	----	----	13	----	ng/mL	----
PFOS-13C_IS	ND(W/B)	----	----	----	13	----	ng/mL	----
PFOS-13C	ND(W/B)	----	----	511	26	----	ng/mL	----
PFNA-13C_IS	Auto	4.704	321	321	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.704	321	511	26	3.4781	ng/mL	----
PFNA	Auto	4.841	354	321	11	7.7981	ng/mL	----
PFDA-13C_IS	Auto	4.895	1134	1134	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.895	1134	511	26	13.2667	ng/mL	----
PFDA	Auto	4.880	1129	1134	12	5.8901	ng/mL	----
8_2-FTS-13C_IS	ND(W/B)	----	----	----	15	----	ng/mL	----
8_2-FTS-13C	ND(W/B)	----	----	511	26	----	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	----	15	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	----	13	----	ng/mL	----
PFUnA	Auto	5.039	935	724	14	7.9833	ng/mL	----
PFUnA-13C_IS	Auto	5.055	724	724	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.055	724	511	26	8.7084	ng/mL	----
PFDoA	ND(W/B)	----	----	1243	17	----	ng/mL	----
PFDoA-13C	Auto	5.258	1243	511	26	10.9329	ng/mL	----
PFDoA-13C_IS	Auto	5.258	1243	1243	17	5.0000	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	----	15	----	ng/mL	----
PFTrDA	Auto	5.428	467	3148	22	0.8580	ng/mL	----
PFTeDA	ND(W/B)	----	----	3148	22	----	ng/mL	----
PFTeDA-13C	Auto	5.577	3148	511	26	35.1635	ng/mL	----
PFTeDA-13C_IS	Auto	5.577	3148	3148	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.232	829	829	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.232	829	511	26	23.3109	ng/mL	----
FOSA	Auto	5.203	243	829	18	1.0934	ng/mL	----
N-MeFOSAA	Auto	5.004	759	5235	19	1.1517	ng/mL	----
N-MeFOSAA-d3	Auto	4.996	5235	511	26	276.2530	ng/mL	----
N-MeFOSAA-d3_IS	Auto	4.996	5235	5235	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.601	749	749	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.601	749	511	26	59.6308	ng/mL	----
N-MeFOSA	Auto	5.616	2420	749	1	12.6422	ng/mL	----
N-MeFOSE-d7	Auto	5.580	262	511	26	17.2407	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.580	262	262	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.594	1401	262	20	19.4398	ng/mL	----

Insight Report

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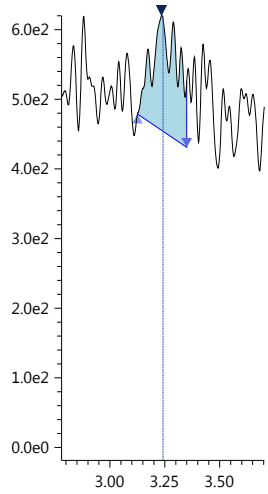
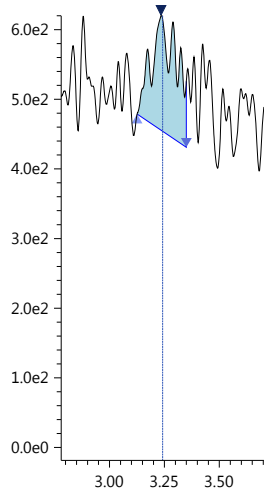
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.094	1119	4398	21	2.4777	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.092	4398	4398	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.092	4398	511	26	241.7744	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.797	826	826	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.797	826	511	26	42.1227	ng/mL	----
N-EtFOSA	Auto	5.758	253	826	23	9.5794	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.730	998	998	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.730	998	511	26	59.5768	ng/mL	----
N-EtFOSE	Auto	5.731	1685	998	24	8.2175	ng/mL	----
13C7-PFUnDA_IS	Auto	5.075	511	511	26	5.0000	ng/mL	----
PFPeS	Auto	4.333	740	308	16	25.6980	ng/mL	----
PFNS	Auto	5.065	952	----	13	0.0000	ng/mL	----

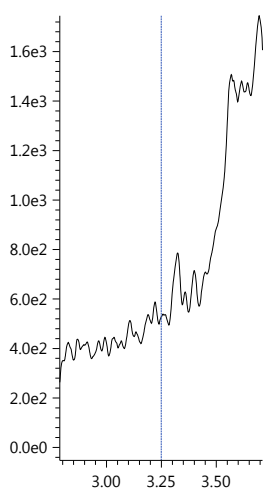
PFBA-13C_IS
Conc 5.0000
RT 3.235 Area 1336
ISTD 216.90>172.15 (-) 6.20e2



PFBA-13C
Conc 24.2161
RT 3.235 Area 1336
Q 216.90>172.15 (-) 6.20e2



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.75e3



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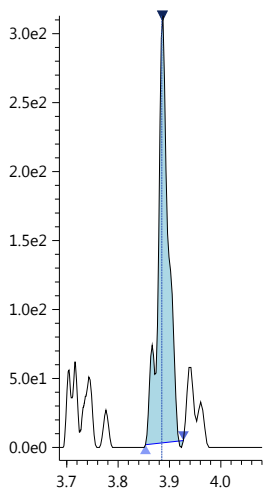
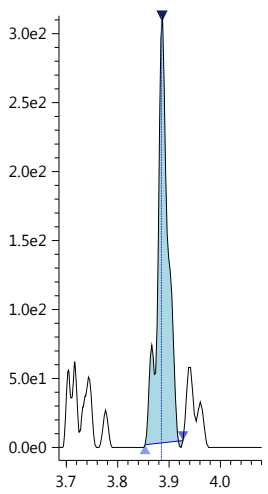
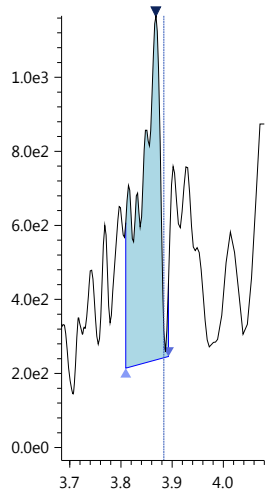
Conc 5.0000
RT 3.886 Area 434
ISTD 267.90>223.00 (-) 3.13e2



PFPeA-13C
Conc 12.9082
RT 3.886 Area 434
Q 267.90>223.00 (-) 3.13e2



PFPeA
Conc 11.2132
RT 3.868 Area 2448
Q 263.05>219.10 (-) 1.17e3



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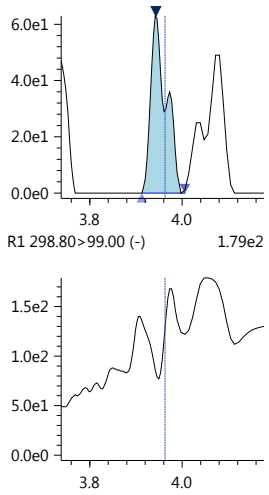
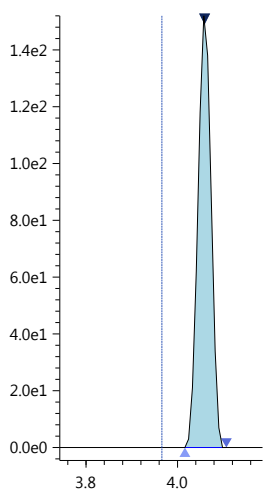
Conc 2.3836
RT 3.943 Area 148
R#1 0.00 (0.00)
Q 299.00>80.00 (-) 6.30e1

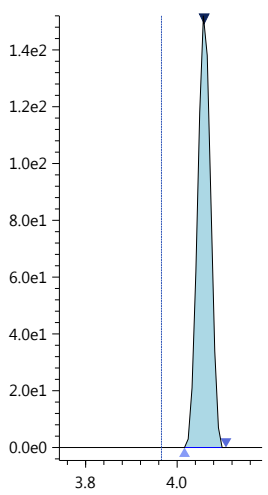


R1 298.80>99.00 (-) 1.79e2

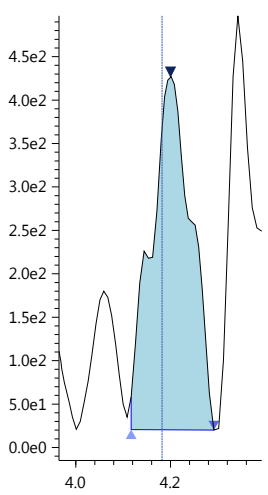
PFBS-13C
Conc 15.3435
RT 4.059 Area 308
Q 301.80>80.00 (-) 1.52e2



PFBS-13C_IS
Conc 5.0000
RT 4.059 Area 308
ISTD 301.80>80.00 (-) 1.52e2



PFHxA-13C_IS
Conc 5.0000
RT 4.200 Area 2417
ISTD 314.90>270.10 (-) 4.97e2



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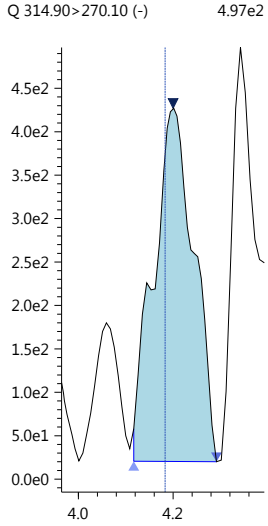
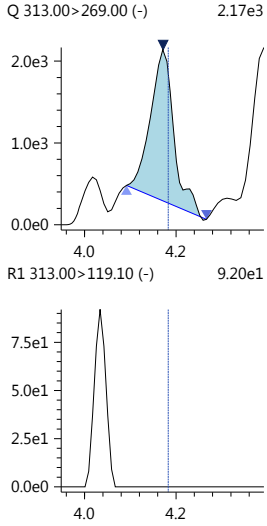
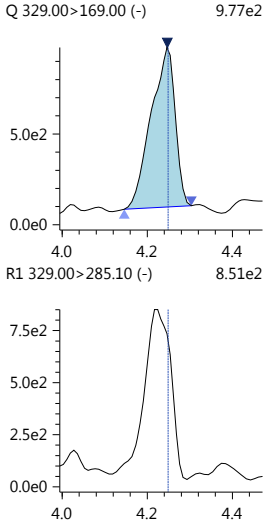
PFHxA-13C
Conc 21.1475
RT 4.200 Area 2417



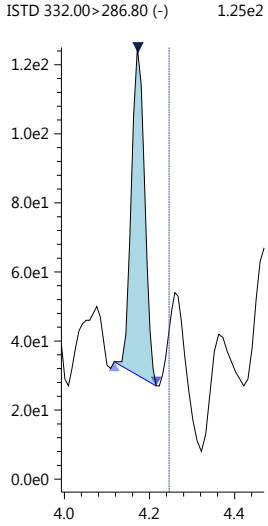
PFHxA
Conc 14.5817
RT 4.172 Area 6530
R#1 0.00 (0.00)



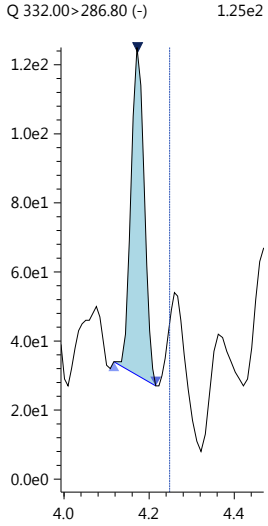
HPFO_DA
Conc 82.8723
RT 4.247 Area 3469
R#1 74.30 (0.00)



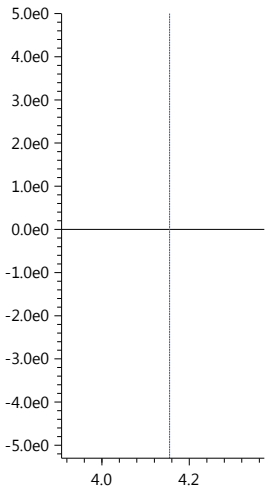
HFPO_DA-13C_IS
Conc 5.0000
RT 4.173 Area 206



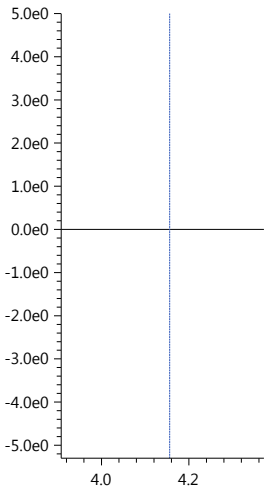
HFPO_DA-13C
Conc 9.6200
RT 4.173 Area 206



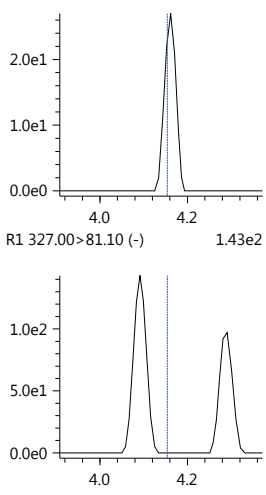
4_2-FTS-13C_IS
Conc ----
RT ---- Area ----



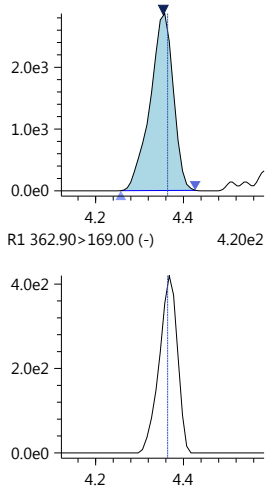
4_2-FTS-13C
Conc ----
RT ---- Area ----



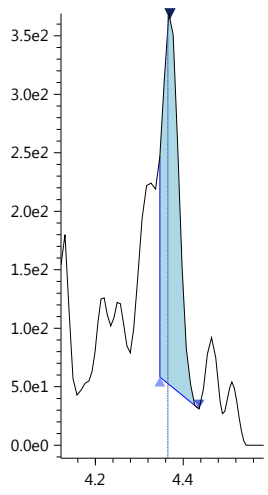
4_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)



PFHpA
Conc 68.9485
RT 4.354 Area 10537
R#1 12.34 (0.00)



PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 814



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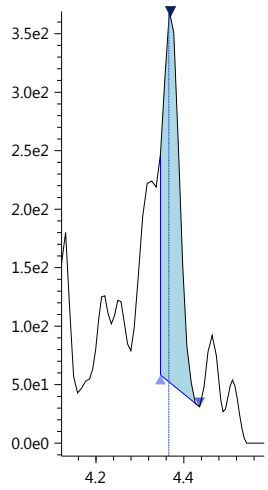
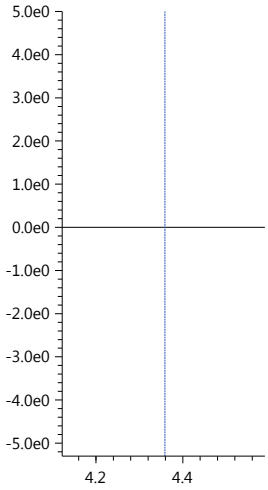
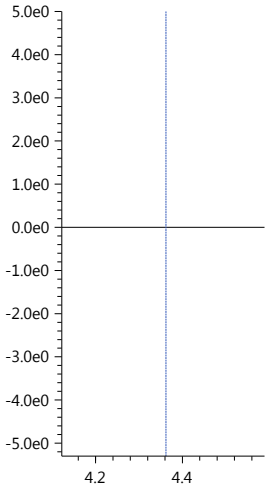
PFHpA-13C
Conc 8.6658
RT 4.370 Area 814
Q 366.90>322.10 (-) 3.69e2



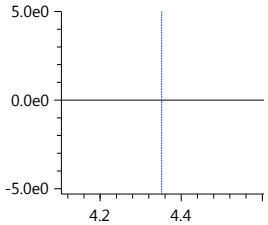
PFHxS-18O_IS
Conc ----
RT ---- Area ----
ISTD 402.70>84.05 (-) 0.00e0



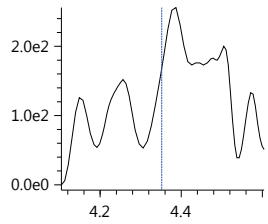
PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 0.00e0



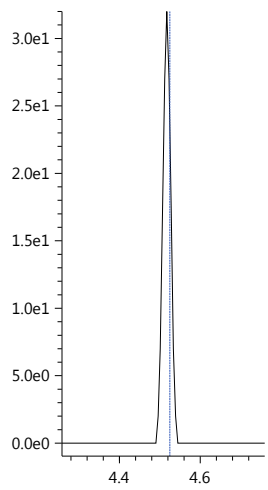
PFHxS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 399.00>80.00 (-) 0.00e0



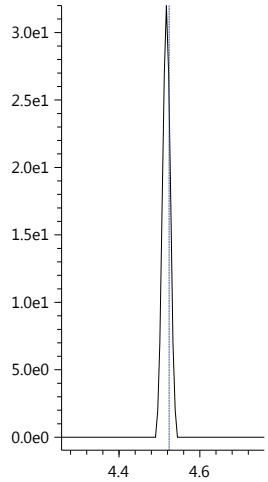
R1 399.00>99.00 (-) 2.56e2



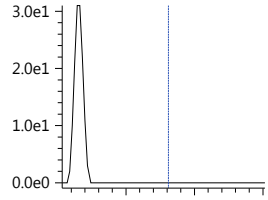
6_2-FTS-13C
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-) 3.20e1



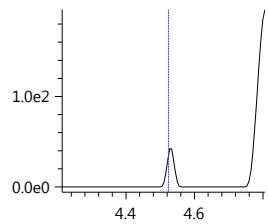
6_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-) 3.20e1



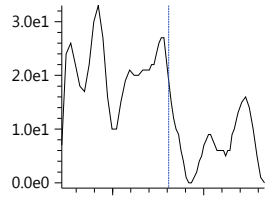
6_2-FTS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 427.00>407.00 (-) 3.10e1



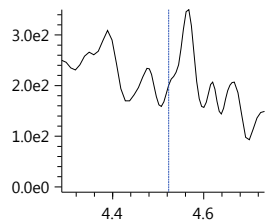
R1 427.00>80.90 (-) 1.96e2



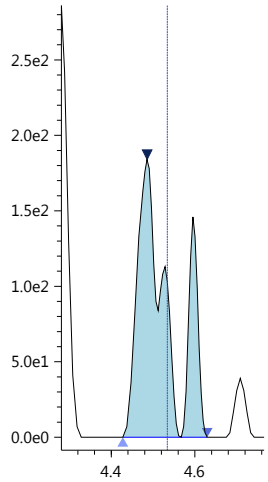
PFHpS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 449.00>80.15 (-) 3.30e1



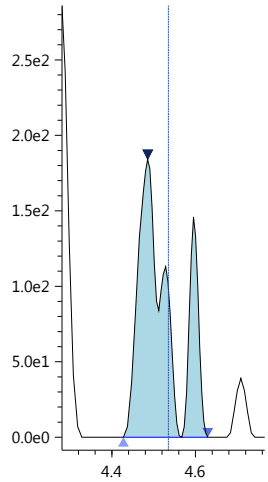
R1 449.00>99.20 (-) 3.50e2



PFOA-13C_IS
Conc 5.0000
RT 4.486 Area 942
ISTD 416.80>372.05 (-) 2.86e2



PFOA-13C
Conc 8.8055
RT 4.486 Area 942
Q 416.80>372.05 (-) 2.86e2



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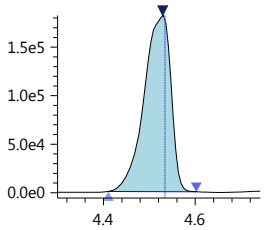
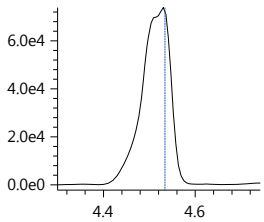
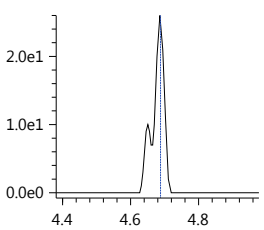
PFOA
Conc 4638.5512
RT 4.529 Area 739819
R#1 40.59 (0.00)
Q 413.00>369.00 (-) 1.83e5



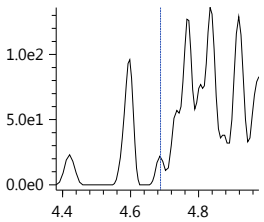
R1 413.00>169.10 (-) 7.38e4



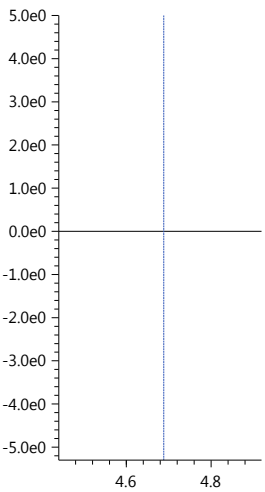
PFOS_1
Conc ----
RT ---- Area ----
R#1 ---- (0.00)
Q 499.00>80.00 (-) 2.60e1



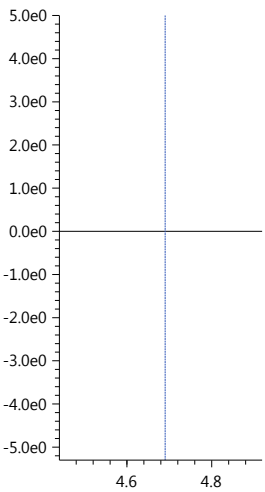
R1 499.00>99.00 (-) 1.36e2



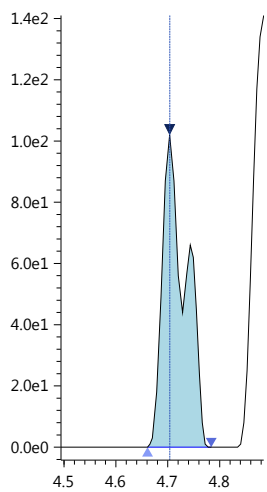
PFOS-13C_IS
Conc ----
RT ---- Area ----
ISTD 502.80>80.05 (-) 0.00e0



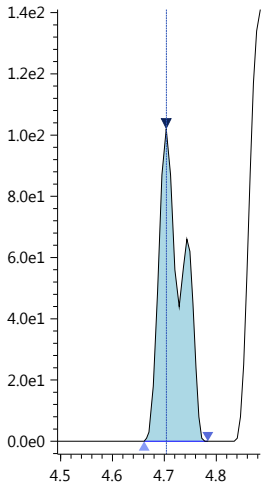
PFOS-13C
Conc ----
RT ---- Area ----
Q 502.80>80.05 (-) 0.00e0



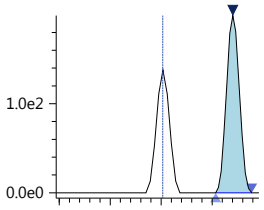
PFNA-13C_IS
Conc 5.0000
RT 4.704 Area 321
ISTD 467.80>423.00 (-) 1.41e2



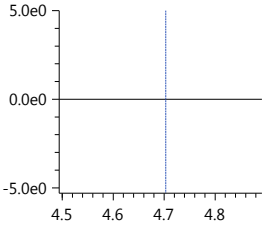
PFNA-13C
Conc 3.4781
RT 4.704 Area 321
Q 467.80>423.00 (-) 1.41e2



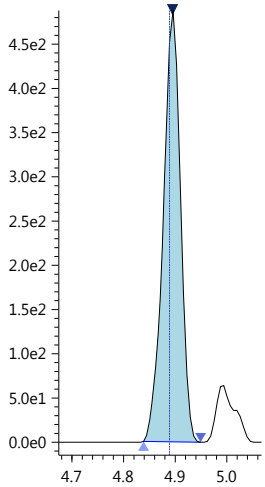
PFNA
Conc 7.7981
RT 4.841 Area 354
R#1 0.00 (0.00)
Q 463.00>418.90 (-) 1.99e2



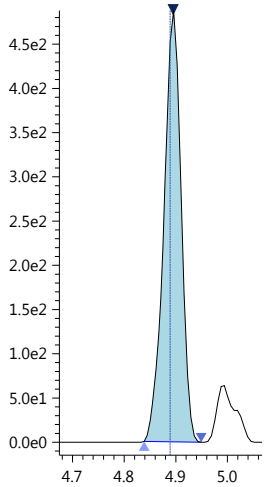
R1 463.00>219.00 (-) 0.00e0



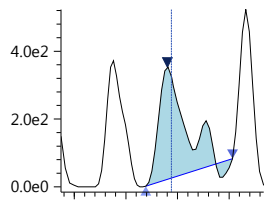
PFDA-13C_IS
Conc 5.0000
RT 4.895 Area 1134
ISTD 514.80>469.95 (-) 4.88e2



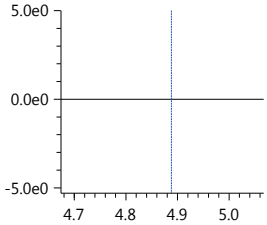
PFDA-13C
Conc 13.2667
RT 4.895 Area 1134
Q 514.80>469.95 (-) 4.88e2



PFDA
Conc 5.8901
RT 4.880 Area 1129
R#1 0.00 (0.00)
Q 513.00>468.80 (-) 5.23e2



R1 513.00>219.10 (-) 0.00e0



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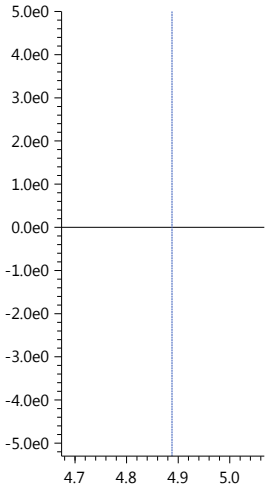
8_2-FTS-13C_IS

Conc ----
RT ---- Area ----

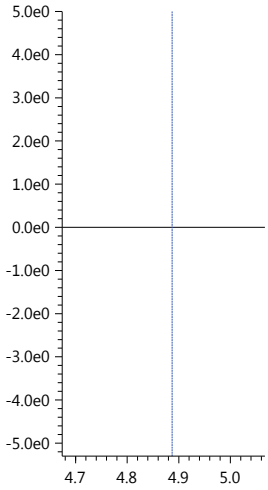
ISTD 528.80>509.00 (-) 0.00e0



8_2-FTS-13C

Conc ----
RT ---- Area ----

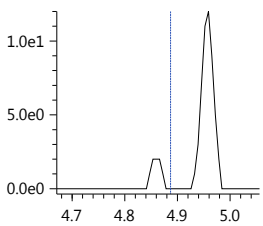
Q 528.80>509.00 (-) 0.00e0



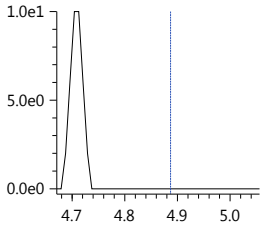
8_2-FTS_1

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

Q 527.10>506.90 (-) 1.20e1



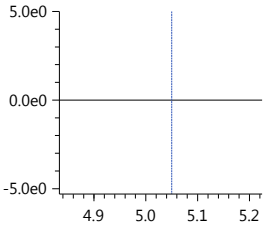
R1 527.20>487.00 (-) 1.00e1



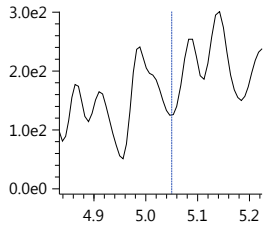
PFDS_1

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

Q 599.00>79.90 (-) 0.00e0



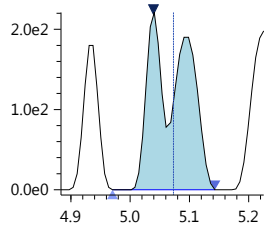
R1 599.00>99.10 (-) 3.01e2



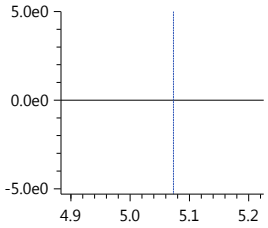
PFUnA

Conc 7.9833
RT 5.039 Area 935
R#1 0.00 (0.00)

Q 563.00>518.90 (-) 2.21e2



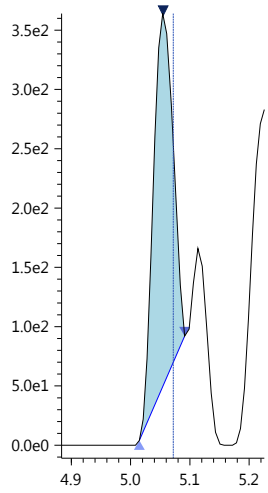
R1 563.00>219.00 (-) 0.00e0



PFUnA-13C_IS

Conc 5.0000
RT 5.055 Area 724

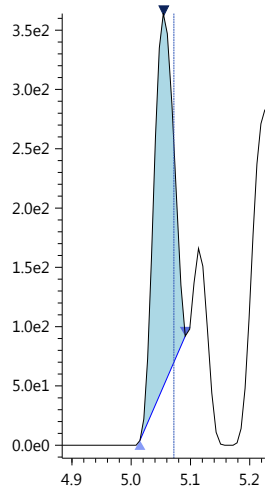
ISTD 564.80>519.95 (-) 3.64e2



PFUnA-13C

Conc 8.7084
RT 5.055 Area 724

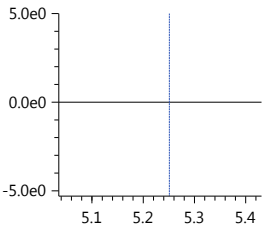
Q 564.80>519.95 (-) 3.64e2



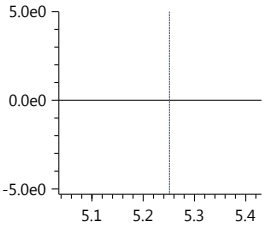
PFDoA

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

Q 613.05>569.00 (-) 0.00e0



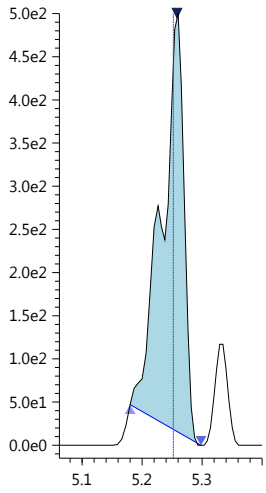
R1 613.05>169.00 (-) 0.00e0



PFDoA-13C

Conc 10.9329
RT 5.258 Area 1243

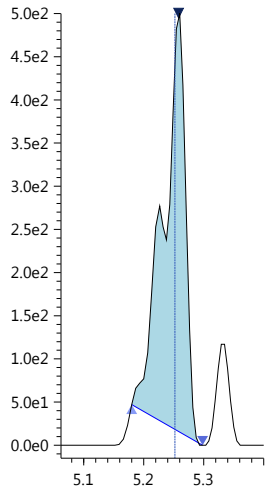
Q 614.80>569.95 (-) 5.00e2



PFDoA-13C_IS

Conc 5.0000
RT 5.258 Area 1243

ISTD 614.80>569.95 (-) 5.00e2



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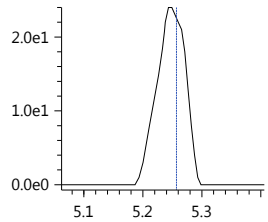
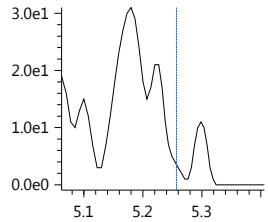
10_2-FtS_1

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

Q 627.00>606.95 (-) 2.40e1



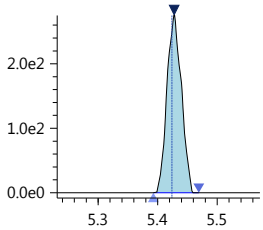
R1 627.00>81.25 (-) 3.10e1



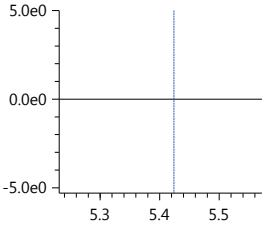
PFTrDA

Conc 0.8580
RT 5.428 Area 467
R#1 0.00 (0.00)

Q 663.00>618.90 (-) 2.75e2



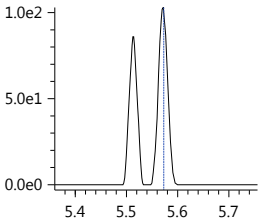
R1 662.90>169.00 (-) 0.00e0



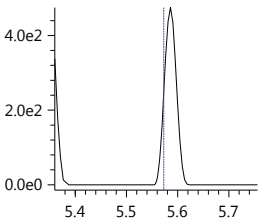
PFTeDA

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

Q 713.40>669.00 (-) 1.03e2



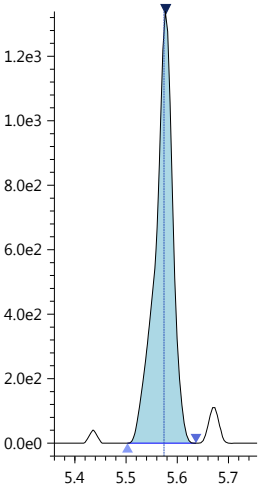
R1 713.40>169.10 (-) 4.75e2



PFTeDA-13C

Conc 35.1635
RT 5.577 Area 3148

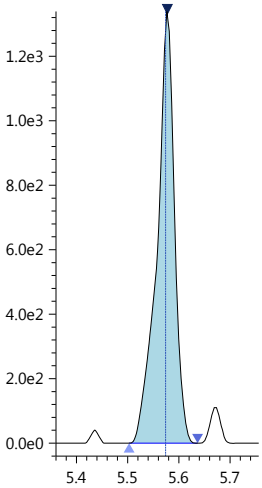
Q 714.70>669.90 (-) 1.34e3



PFTeDA-13C_IS

Conc 5.0000
RT 5.577 Area 3148

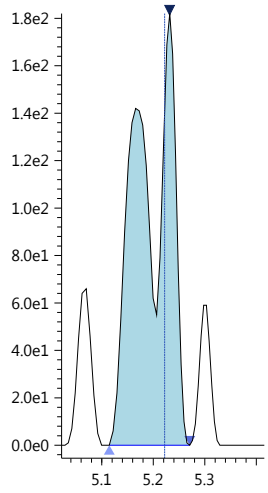
ISTD 714.70>669.90 (-) 1.34e3



FOSA-13C_IS

Conc 5.0000
RT 5.232 Area 829

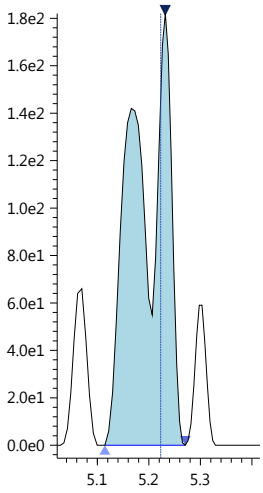
ISTD 506.00>78.05 (-) 1.82e2



FOSA-13C

Conc 23.3109
RT 5.232 Area 829

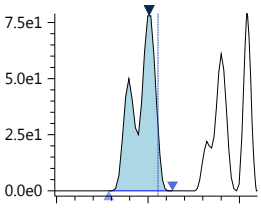
Q 506.00>78.05 (-) 1.82e2



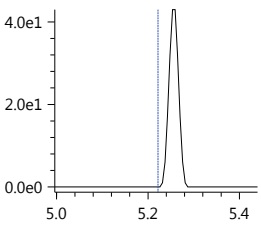
FOSA

Conc 1.0934
RT 5.203 Area 243
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 7.90e1



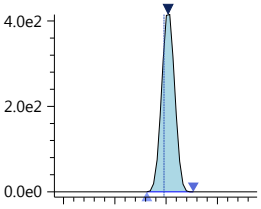
R1 498.20>64.10 (-) 4.30e1



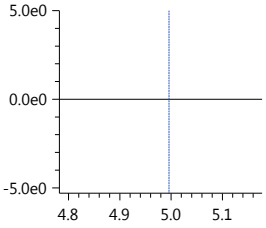
N-MeFOSAA

Conc 1.1517
RT 5.004 Area 759
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 4.15e2



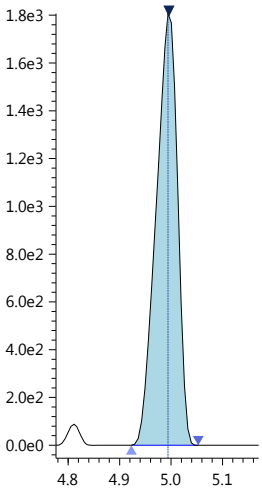
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 276.2530
RT 4.996 Area 5235

Q 572.80>419.05 (-) 1.81e3



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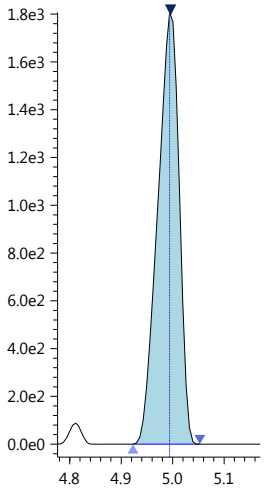
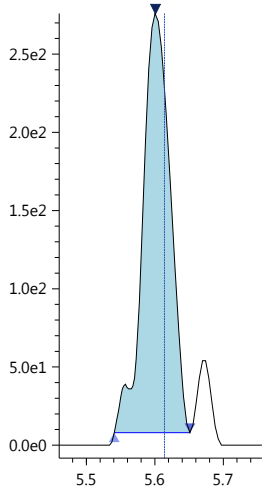
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.996 Area 5235

ISTD 572.80>419.05 (-) 1.81e3



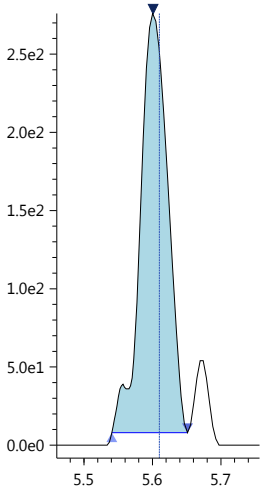
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.601 Area 749

ISTD 514.90>168.90 (-) 2.76e2



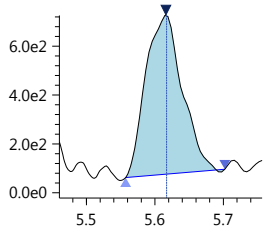
N-MeFOSA-d3
Conc 59.6308
RT 5.601 Area 749

Q 514.90>168.90 (-) 2.76e2

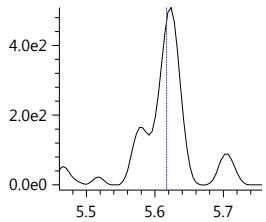


N-MeFOSA
Conc 12.6422
RT 5.616 Area 2420
R#1 60.53 (0.00)

Q 512.00>169.10 (-) 7.26e2

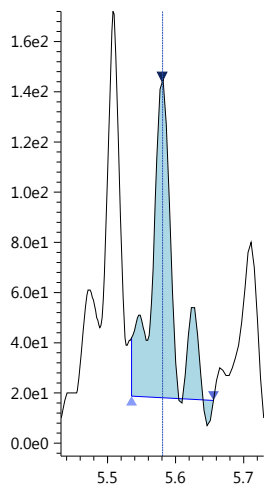


R1 512.00>219.00 (-) 5.09e2



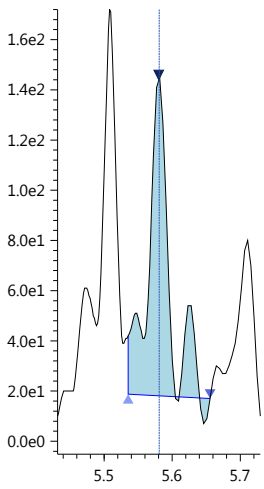
N-MeFOSE-d7
Conc 17.2407
RT 5.580 Area 262

Q 622.70>59.10 (-) 1.72e2



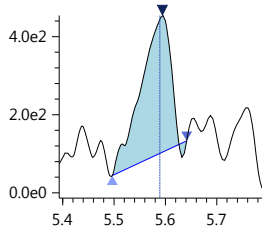
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.580 Area 262

ISTD 622.70>59.10 (-) 1.72e2

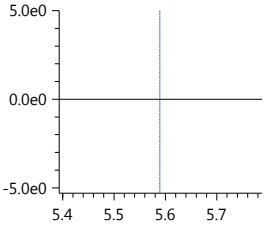


N-MeFOSE
Conc 19.4398
RT 5.594 Area 1401
R#1 0.00 (0.00)

Q 616.00>59.00 (-) 4.54e2

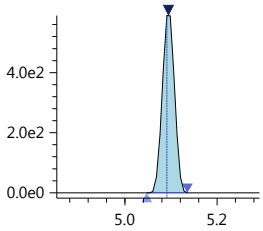


R1 556.00>121.20 (-) 0.00e0

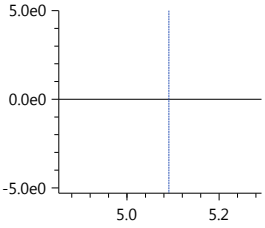


N-EtFOSAA
Conc 2.4777
RT 5.094 Area 1119
R#1 0.00 (0.00)

Q 584.20>418.95 (-) 5.90e2

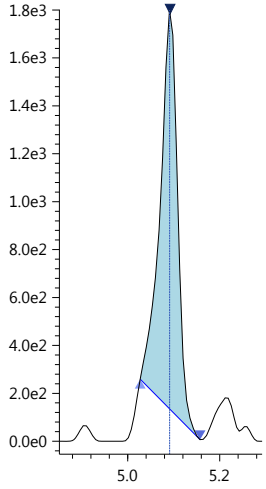


R1 584.20>526.10 (-) 0.00e0



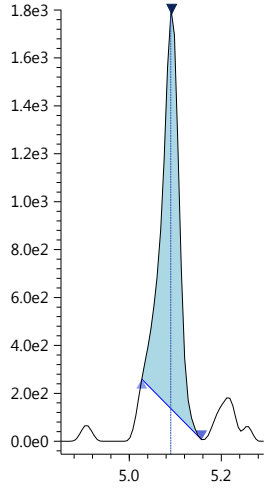
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 4398

ISTD 588.80>419.00 (-) 1.80e3



N-EtFOSAA-d5
Conc 241.7744
RT 5.092 Area 4398

Q 588.80>419.00 (-) 1.80e3



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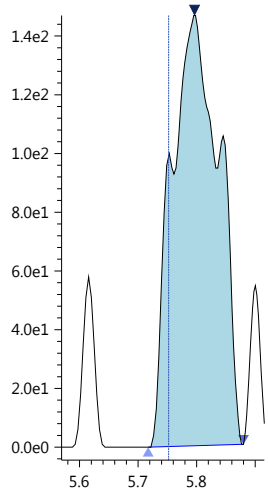
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.797 Area 826

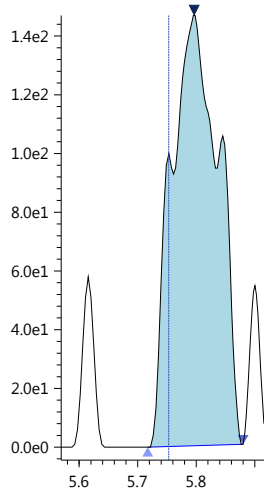
ISTD 530.90>169.15 (-) 1.47e2



N-EtFOSA-d9

Conc 42.1227
RT 5.797 Area 826

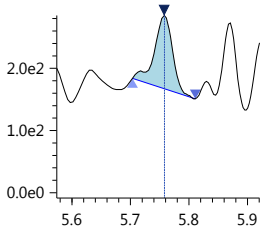
Q 530.90>169.15 (-) 1.47e2



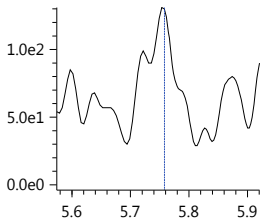
N-EtFOSA

Conc 9.5794
RT 5.758 Area 253
R#1 80.14 (0.00)

Q 526.90>169.10 (-) 2.85e2



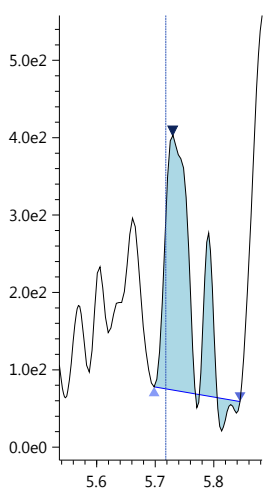
R1 526.90>219.00 (-) 1.31e2



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.730 Area 998

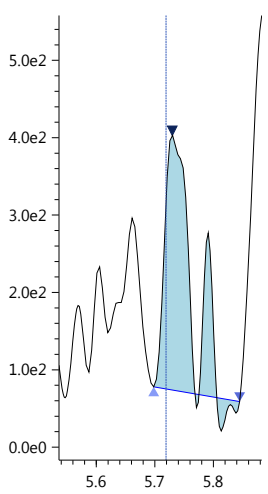
ISTD 638.70>59.10 (-) 5.58e2



N-EtFOSE-d9

Conc 59.5768
RT 5.730 Area 998

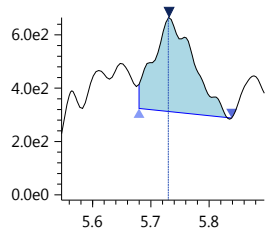
Q 638.70>59.10 (-) 5.58e2



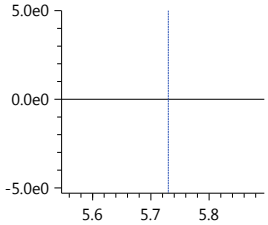
N-EtFOSE

Conc 8.2175
RT 5.731 Area 1685
R#1 0.00 (0.00)

Q 630.00>58.90 (-) 6.65e2



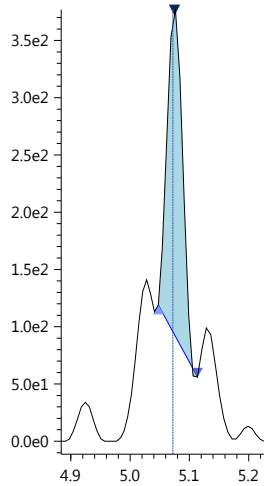
R1 570.00>136.10 (-) 0.00e0



13C7-PFUnDA_IS

Conc 5.0000
RT 5.075 Area 511

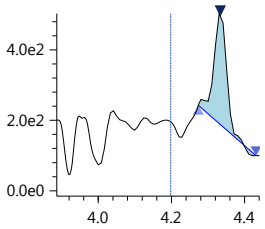
ISTD 570.00>525.00 (-) 3.77e2



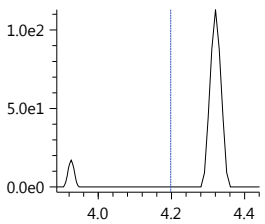
PFPeS

Conc 25.6980
RT 4.333 Area 740
R#1 29.97 (0.00)

Q 349.00>99.00 (-) 5.03e2



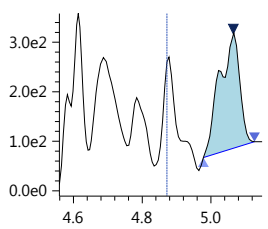
R1 349.00>79.95 (-) 1.13e2



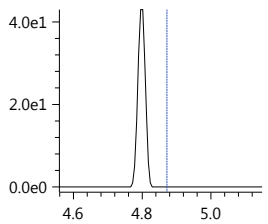
PFNS

Conc 0.0000
RT 5.065 Area 952
R#1 0.00 (0.00)

Q 549.00>99.00 (-) 3.58e2



R1 549.00>79.95 (-) 4.30e1



Insight Report

Printed at 1/21/2019 9:31:25 AM

190118_033

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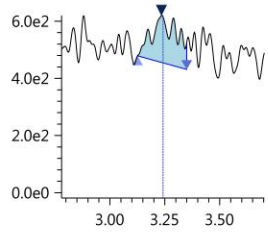
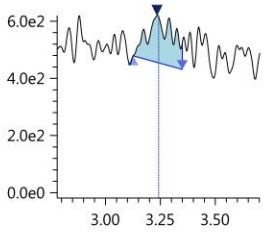
Date acquired: 1/18/2019 7:31:42 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190118_b1\190118_033.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

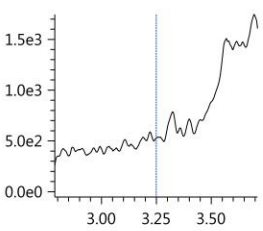
PFBA-13C_IS
Conc 5.0000
RT 3.235 Area 1336
ISTD 216.90>172.15 (-) 6.20e2



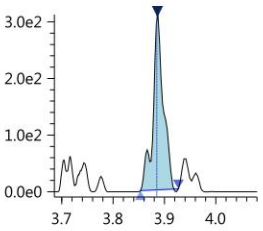
PFBA-13C
Conc 24.2161
RT 3.235 Area 1336
Q 216.90>172.15 (-) 6.20e2



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.75e3



PFPeA-13C_IS
Conc 5.0000
RT 3.886 Area 434
ISTD 267.90>223.00 (-) 3.13e2



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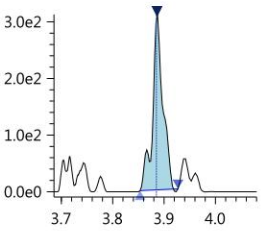
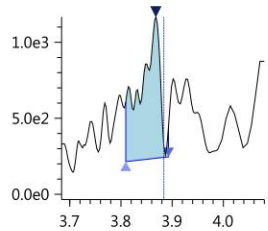
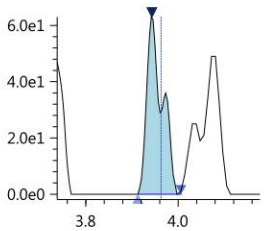
Conc 12.9082
RT 3.886 Area 434
Q 267.90>223.00 (-) 3.13e2



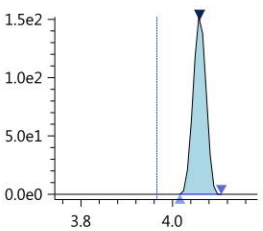
PFPeA
Conc 2.4509
RT 3.868 Area 2448
Q 263.05>219.10 (-) 1.17e3



PFBS_1
Conc 0.5213
RT 3.943 Area 148
Q 299.00>80.00 (-) 6.30e1



PFBS-13C
Conc 15.3435
RT 4.059 Area 308
Q 301.80>80.00 (-) 1.52e2



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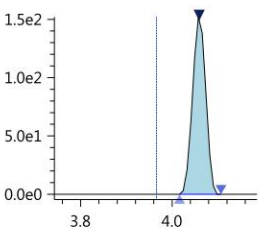
ISTD 301.80>80.00 (-) 1.52e2



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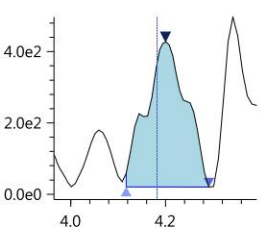
Conc 5.0000
RT 4.200 Area 2417
ISTD 314.90>270.10 (-) 4.97e2



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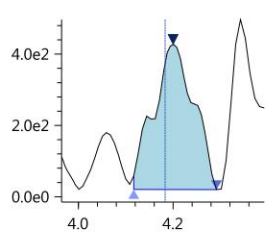
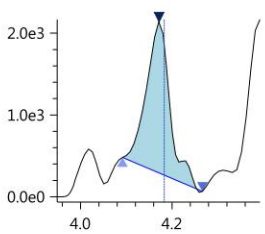
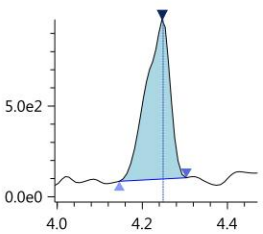
Conc 21.1475
RT 4.200 Area 2417
Q 314.90>270.10 (-) 4.97e2



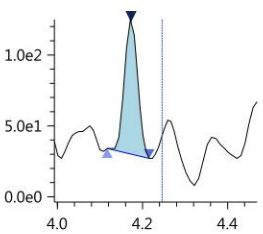
PFHxA
Conc 3.2261
RT 4.172 Area 6530
Q 313.00>269.00 (-) 2.17e3



HPFO_DA
Conc 17.5517
RT 4.247 Area 3469
Q 329.00>169.00 (-) 9.77e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.173 Area 206
ISTD 332.00>286.80 (-) 1.25e2



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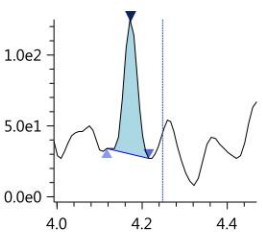
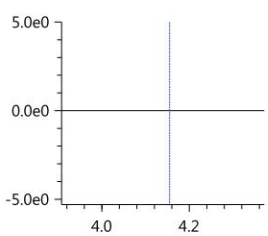
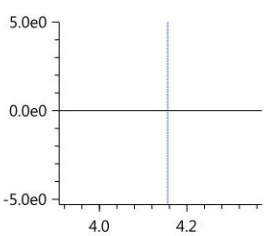
Conc 9.6200
RT 4.173 Area 206
Q 332.00>286.80 (-) 1.25e2



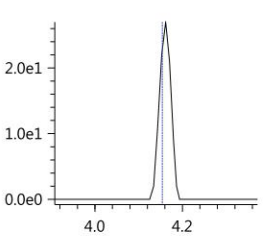
4_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 328.80>309.05 (-) 0.00e0



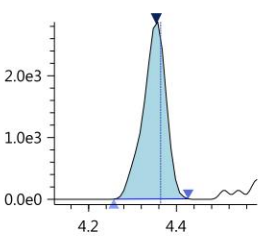
4_2-FTS-13C
Conc ----
RT ---- Area ----
Q 328.80>309.05 (-) 0.00e0



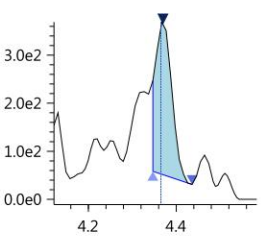
4_2-FTS_1
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-) 2.70e1



PFHpA
Conc 15.0471
RT 4.354 Area 10537
Q 362.90>319.00 (-) 2.87e3



PFHpA-13C_IS
Conc 5.0000
RT 4.370 Area 814
ISTD 366.90>322.10 (-) 3.69e2



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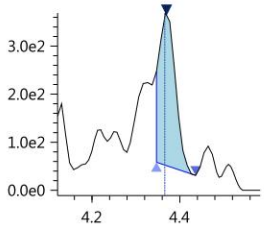
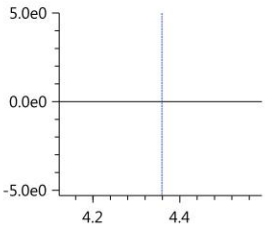
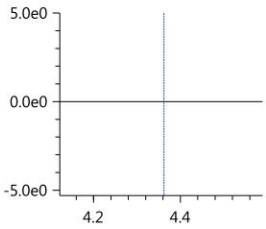
PFHpA-13C
Conc 8.6658
RT 4.370 Area 814
Q 366.90>322.10 (-) 3.69e2



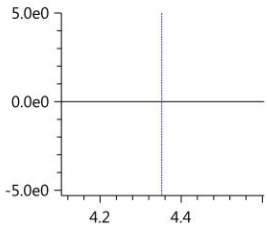
PFHxS-18O_IS
Conc ----
RT ---- Area ----
ISTD 402.70>84.05 (-) 0.00e0



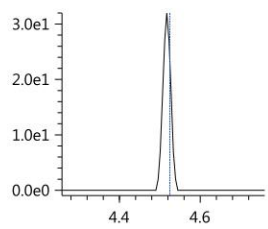
PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 0.00e0



PFHxS_1
Conc ----
RT ---- Area ----
Q 399.00>80.00 (-) 0.00e0



6_2-FTS-13C
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-) 3.20e1



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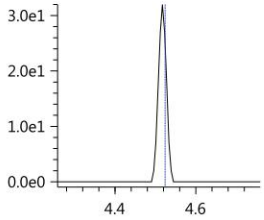
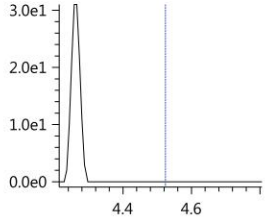
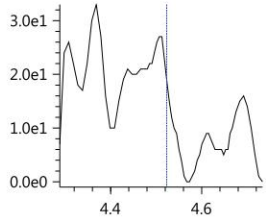
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-) 3.20e1



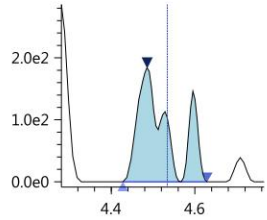
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 3.10e1



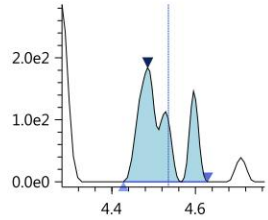
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.30e1



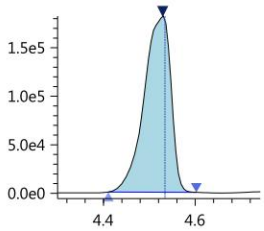
PFOA-13C_IS
Conc 5.0000
RT 4.486 Area 942
ISTD 416.80>372.05 (-) 2.86e2



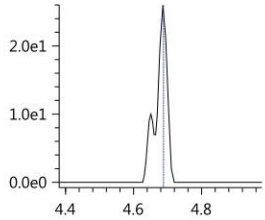
PFOA-13C
Conc 8.8055
RT 4.486 Area 942
Q 416.80>372.05 (-) 2.86e2



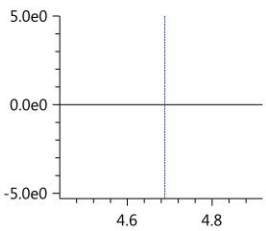
PFOA
Conc 1024.9555
RT 4.529 Area 739819
Q 413.00>369.00 (-) 1.83e5



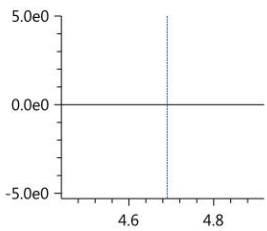
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 2.60e1



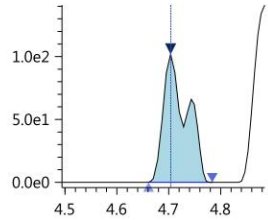
PFOS-13C_IS
Conc ----
RT ---- Area ----
ISTD 502.80>80.05 (-) 0.00e0



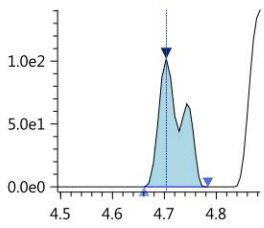
PFOS-13C
Conc ----
RT ---- Area ----
Q 502.80>80.05 (-) 0.00e0



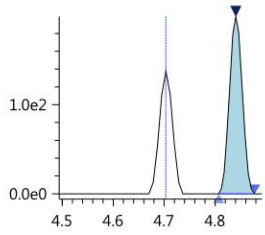
PFNA-13C_IS
Conc 5.0000
RT 4.704 Area 321
ISTD 467.80>423.00 (-) 1.41e2



PFNA-13C
Conc 3.4781
RT 4.704 Area 321
Q 467.80>423.00 (-) 1.41e2



PFNA
Conc 1.6863
RT 4.841 Area 354
Q 463.00>418.90 (-) 1.99e2



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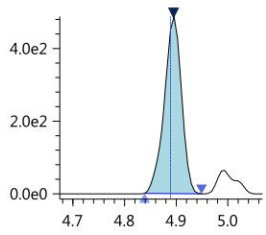
Conc 5.0000
RT 4.895 Area 1134
ISTD 514.80>469.95 (-) 4.88e2



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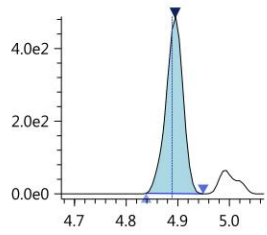
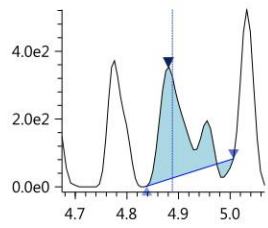
RT 4.895 Area 1134
Q 514.80>469.95 (-) 4.88e2



PFDA
Conc 1.2946
RT 4.880 Area 1129
Q 513.00>468.80 (-) 5.23e2



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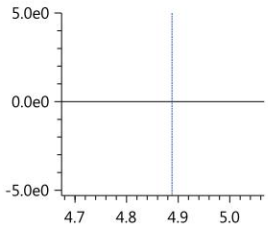
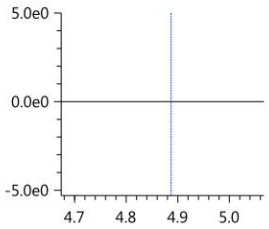
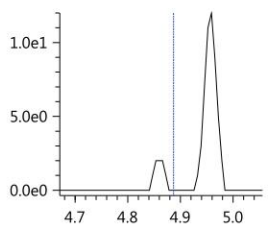
8_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 528.80>509.00 (-) 0.00e0



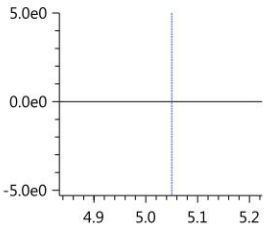
8_2-FTS-13C
Conc ----
RT ---- Area ----
Q 528.80>509.00 (-) 0.00e0



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 1.20e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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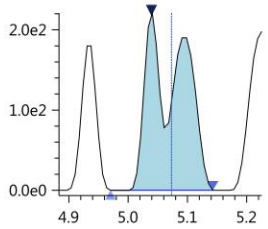
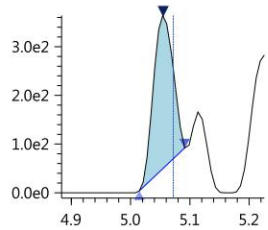
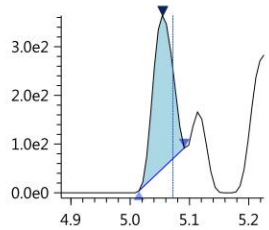
Conc 1.7648
RT 5.039 Area 935
Q 563.00>518.90 (-) 2.21e2



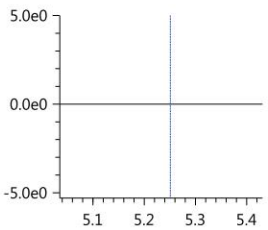
PFUnA-13C_IS
Conc 5.0000
RT 5.055 Area 724
ISTD 564.80>519.95 (-) 3.64e2



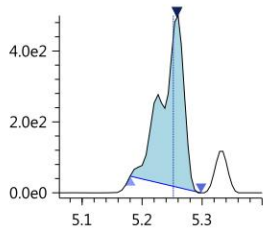
PFUnA-13C
Conc 8.7084
RT 5.055 Area 724
Q 564.80>519.95 (-) 3.64e2



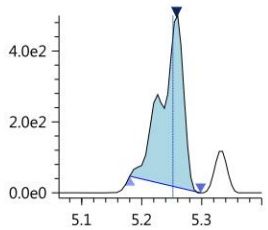
PFDoA
Conc ----
RT ---- Area ----
Q 613.05>569.00 (-) 0.00e0



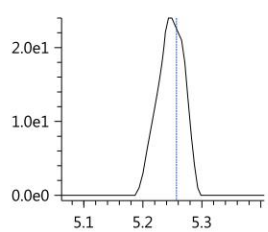
PFDoA-13C
Conc 10.9329
RT 5.258 Area 1243
Q 614.80>569.95 (-) 5.00e2



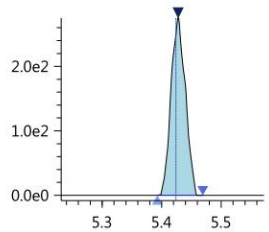
PFDoA-13C_IS
Conc 5.0000
RT 5.258 Area 1243
ISTD 614.80>569.95 (-) 5.00e2



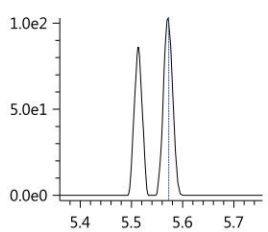
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 2.40e1



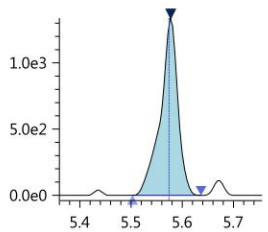
PFTrDA
Conc 0.1882
RT 5.428 Area 467
Q 663.00>618.90 (-) 2.75e2



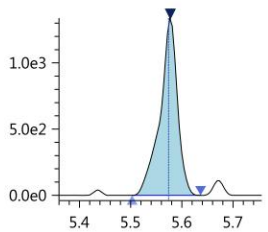
PFTeDA
Conc ----
RT ---- Area ----
Q 713.40>669.00 (-) 1.03e2



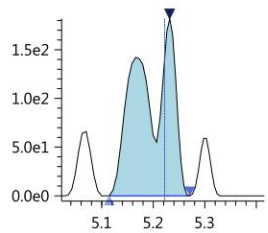
PFTeDA-13C
Conc 35.1635
RT 5.577 Area 3148
Q 714.70>669.90 (-) 1.34e3



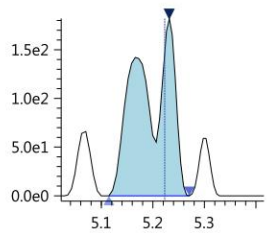
PFTeDA-13C_IS
Conc 5.0000
RT 5.577 Area 3148
ISTD 714.70>669.90 (-) 1.34e3



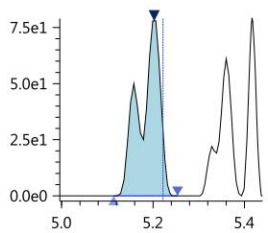
FOSA-13C_IS
Conc 5.0000
RT 5.232 Area 829
ISTD 506.00>78.05 (-) 1.82e2



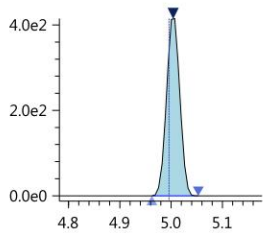
FOSA-13C
Conc 23.3109
RT 5.232 Area 829
Q 506.00>78.05 (-) 1.82e2



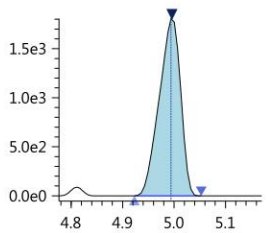
FOSA
Conc 0.2402
RT 5.203 Area 243
Q 498.20>78.00 (-) 7.90e1



N-MeFOSAA
Conc 0.2636
RT 5.004 Area 759
Q 570.20>419.00 (-) 4.15e2



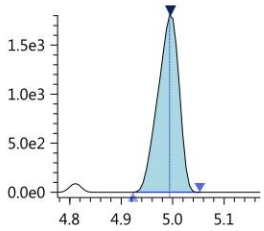
N-MeFOSAA-d3
Conc 276.2530
RT 4.996 Area 5235
Q 572.80>419.05 (-) 1.81e3



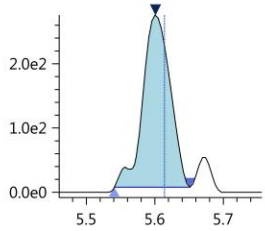
Insight Report

Printed at 1/21/2019 9:31:25 AM

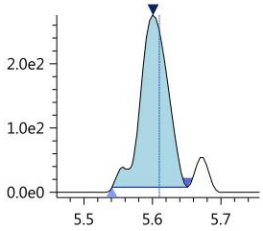
N-MeFOSAA-d3_IS
Conc 5.0000
RT 4.996 Area 5235
ISTD 572.80>419.05 (-) 1.81e3



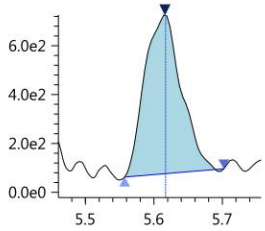
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.601 Area 749
ISTD 514.90>168.90 (-) 2.76e2



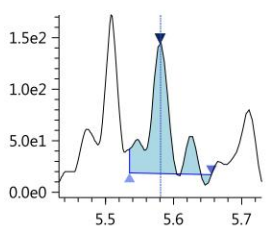
N-MeFOSA-d3
Conc 59.6308
RT 5.601 Area 749
Q 514.90>168.90 (-) 2.76e2



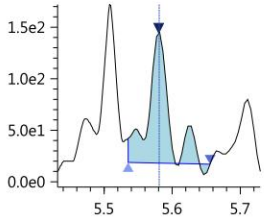
N-MeFOSA
Conc 2.7784
RT 5.616 Area 2420
Q 512.00>169.10 (-) 7.26e2



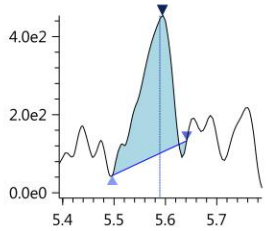
N-MeFOSE-d7
Conc 17.2407
RT 5.580 Area 262
Q 622.70>59.10 (-) 1.72e2



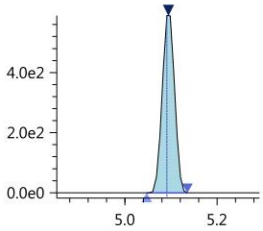
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.580 Area 262
ISTD 622.70>59.10 (-) 1.72e2



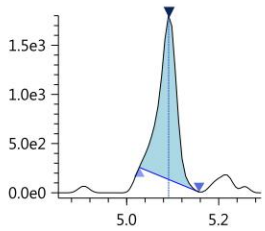
N-MeFOSE
Conc 4.2078
RT 5.594 Area 1401
Q 616.00>59.00 (-) 4.54e2



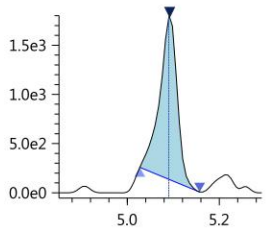
N-EtFOSAA
Conc 0.5480
RT 5.094 Area 1119
Q 584.20>418.95 (-) 5.90e2



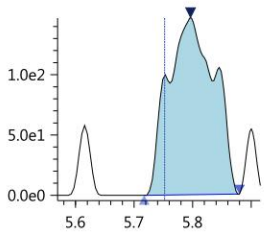
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.092 Area 4398
ISTD 588.80>419.00 (-) 1.80e3



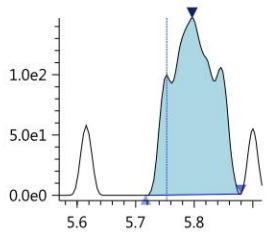
N-EtFOSAA-d5
Conc 241.7744
RT 5.092 Area 4398
Q 588.80>419.00 (-) 1.80e3



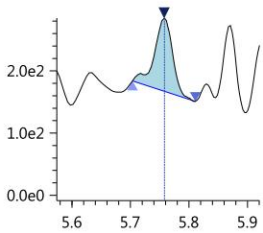
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.797 Area 826
ISTD 530.90>169.15 (-) 1.47e2



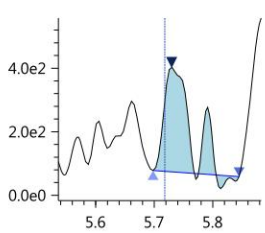
N-EtFOSA-d9
Conc 42.1227
RT 5.797 Area 826
Q 530.90>169.15 (-) 1.47e2



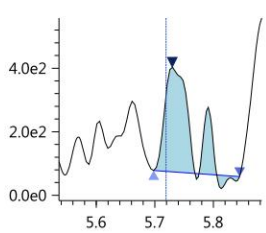
N-EtFOSA
Conc 2.0489
RT 5.758 Area 253
Q 526.90>169.10 (-) 2.85e2



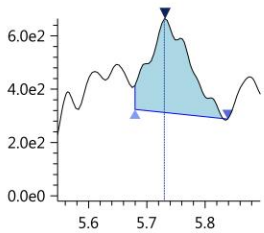
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.730 Area 998
ISTD 638.70>59.10 (-) 5.58e2



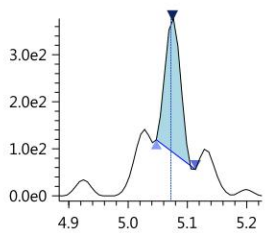
N-EtFOSE-d9
Conc 59.5768
RT 5.730 Area 998
Q 638.70>59.10 (-) 5.58e2



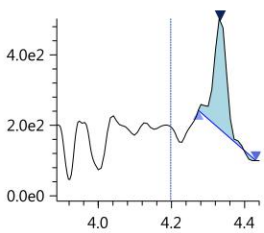
N-EtFOSE
Conc 1.7817
RT 5.731 Area 1685
Q 630.00>58.90 (-) 6.65e2



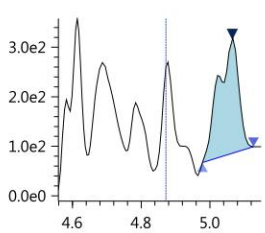
13C7-PFUnDA_IS
Conc 5.0000
RT 5.075 Area 511
ISTD 570.00>525.00 (-) 3.77e2



PFPeS
Conc 5.8733
RT 4.333 Area 740
Q 349.00>99.00 (-) 5.03e2



PFNS
Conc 0.0000
RT 5.065 Area 952
Q 549.00>99.00 (-) 3.58e2



122018_b3

1st Review: Chris Muller JAN 15 2019
2nd Review:
Column: Phenomenex EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 18-OLC-02-58C **B:** 5mM Ammonium Acetate In MeOH 18-OLC-02-58D

ALS Environmental
LCMS06 -Shimadzu 8050

ICAL Date: 12/19/2018
Cal. Std. xp: 3/12/2018
ICAL ID: KC1800576
LIMS ID: 619743

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	18-OLC-02-56O	122018_046	PFAS_121918_CM.lcm	1x	☒	High EtFOSAA, MeFOSAA surr, Low 6:2 8:2 surr, natives ok
2	IB	18-OLC-02-56N	122018_047	PFAS_121918_CM.lcm	1x	☒	High EtFOSAA, MeFOSAA, surr, high bais ND
3	KQ1818316-06	MB	122018_048	PFAS_121918_CM.lcm	1x	☒	High EtFOSAA surr high bias ND
4	KQ1818316-05	LCS	122018_049	PFAS_121918_CM.lcm	1x	☒	High EtFOSAA, MeFOSAA surr natives ok
5	K1812302-001		122018_050	PFAS_121918_CM.lcm	1x	☒	High MeFOSAA, EtFOSAA surr, High bias ND
6	K1812302-002		122018_051	PFAS_121918_CM.lcm	1x	☒	High EtFOSAA surr , High bias ND
7	KQ1818316-01	K1812302-002 MS	122018_052	PFAS_121918_CM.lcm	1x	☒	High MeFOSAA, EtFOSAA surr, Natives ok
8	KQ1818316-02	K1812302-002 DMS	122018_053	PFAS_121918_CM.lcm	1x	☒	High MeFOSAA, EtFOSAA surr, Natives ok

190125_b6

ICAL Date: 1/18/2019
Cal. Std. xp: 3/12/2019
ICAL ID: KC1900021
LIMS ID: 623320

1st Review: Chris Muller
2nd Review: JAN 2 8 2019
ALS Environmental
LCMS06 -Shimadzu 8050
Column: Phenomenx EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 18-OLC-02-75A **B:** 5mM Ammonium Acetate In MeOH 18-OLC-02-75B

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	18-OLC-02-70B	190125_071	PFAS_121918_CM.lcm	1x	☒	
2	IB	18-OLC-02-70C	190125_072	PFAS_121918_CM.lcm	1x	☒	High Fosa surr, ND
3	KQ1900950-03	MB	190125_073	PFAS_121918_CM.lcm	1x	☒	
4	KQ1900950-01	LCS	190125_074	PFAS_121918_CM.lcm	1x	☒	
5	KQ1900950-02	DLCS	190125_075	PFAS_121918_CM.lcm	1x	☒	
6	K1900645-001		190125_076	PFAS_121918_CM.lcm	1x	☒	Low PFBA, PFPeA, PFHxA, surr, High 8:2 surr, Matrix. See dilution for PFBS, MeFOSE, EtFOSE
7	K1812302-003	5X	190125_077	PFAS_121918_CM.lcm	1x	☒	

190104_b5

ICAL Date: 1/4/2019
Cal. Std. xp: 3/12/2019
ICAL ID: KC1900007
LIMS ID: 621097

1st Review: Chris Muller
2nd Review: JAN 21 2019
Column: LCMS06 -Shimadzu 8050
Phenomenex EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 18-OLC-02-64C **B:** 5mM Ammonium Acetate In MeOH 18-OLC-02-64D

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	18-OLC-02-64H	010419_119	PFAS_121918_CM	1x	☒	
2	IB	18-OLC-02-64G	010419_120	PFAS_121918_CM	1x	☒	
3	KQ1818747-04	MB	010419_121	PFAS_121918_CM	1x	☒	
4	KQ1818747-05	LCS	010419_122	PFAS_121918_CM	1x	☒	
5	KQ1818747-06	DLCS	010419_123	PFAS_121918_CM	1x	☒	
6	R1812115-001		010419_124	PFAS_121918_CM	1x	☒	
7	R1812115-002		010419_125	PFAS_121918_CM	1x	☒	
8	R1812115-003		010419_126	PFAS_121918_CM	1x	☒	
9	R1812115-004		010419_127	PFAS_121918_CM	1x	☒	
10	R1812115-005		010419_128	PFAS_121918_CM	1x	☒	
11	KQ1818747-01	R1812115-005 MS	010419_129	PFAS_121918_CM	1x	☒	
12	KQ1818747-02	R1812115-005 DMS	010419_130	PFAS_121918_CM	1x	☒	
13	R1812115-006		010419_131	PFAS_121918_CM	1x	☒	Low TeDA surr, QC ok, RA passes. Report from RA
14	R1812115-007		010419_132	PFAS_121918_CM	1x	☒	
15	K1812302-003		010419_133	PFAS_121918_CM	1x	☒	See dilution for PFHxS, PFPeA, PFHxA
16	K1812302-004		010419_134	PFAS_121918_CM	1x	☒	
17	K1812308-001		010419_135	PFAS_121918_CM	1x	☒	
18	K1812308-002		010419_136	PFAS_121918_CM	1x	☒	
19	K1812308-003		010419_137	PFAS_121918_CM	1x	☒	

122018_b1

st Review: Chris Muller JAN 0 8 2019

nd Review:

Column: Phenomenal EVO-C18 100X4.6 mm S/N: H18-003108

Mobile Phases A: 5mM Ammonium Acetate in H2O H2O 18-OLC-02-58C B: 5mM Ammonium Acetate In MeOH 18-OLC-02-58D

ALS Environmental

LCMS06 -Shimadzu 8050

ICAL Date: 12/19/2018

Cal. Std. xp: 3/12/2018

ICAL ID: KC1800576

LIMS ID: 619896

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	18-OLC-02-56O	122018_035	PFAS_121918_CM.lcm	1x	☒	
2	IB	18-OLC-02-56N	122018_036	PFAS_121918_CM.lcm	1x	☒	
3	SOIL	S MB KQ18316	122018_037	PFAS_121918_CM.lcm	1x	☒	
4	0.20	S MDL D2	122018_038	PFAS_121918_CM.lcm	1x	☒	
5	0.4	S MDL D2	122018_039	PFAS_121918_CM.lcm	1x	☒	
6	0.8	W MDL D2 ENVI	122018_040	PFAS_121918_CM.lcm	1x	☒	
7	0.8	W MDL D2 NO ENVI	122018_041	PFAS_121918_CM.lcm	1x	☒	
8	1.6	W MDL D2 ENVI	122018_042	PFAS_121918_CM.lcm	1x	☒	
9	1.6	W MDL D2 NO ENVI	122018_043	PFAS_121918_CM.lcm	1x	☒	
10	W	W MDL MB ENVI	122018_044	PFAS_121918_CM.lcm	1x	☒	
11	W	W MDL MB NO ENVI	122018_045	PFAS_121918_CM.lcm	1x	☒	

File Name	Sample Name	IS Peak Area (counts)		
121918_011	IB	6283367		
121918_012	0.05 PPB ICAL	6278688		
121918_013	0.10 PPB ICAL	6051894	AVERAGE OF CURVE	
121918_014	0.50 PPB ICAL	6140780	5974951	
121918_015	1.0 PPB ICAL	6087271	LAB QAP 50-200% of most recent CCV	
121918_016	5.0 PPB ICAL	5595480		
121918_017	10.0 PPB ICAL	5505901		
121918_018	15.0 PPB ICAL	5185309		
121918_019	IB	6214969	50%	150%
121918_020	1.0 PPB ICV	6310443	3155221.5	9465664.5
121918_021	IB	6378779		
121918_022	T-PFOA	983		
122018_035	1.0 PPB CCV	5156933		
122018_036	IB	5241484	OK	OK
122018_037	SOIL	7158142	OK	OK
122018_038	0.20	7273025	OK	OK
122018_039	0.4	7060557	OK	OK
122018_040	0.8	6598804	OK	OK
122018_041	0.8	5995651	OK	OK
122018_042	1.6	6764639	OK	OK
122018_043	1.6	6191167	OK	OK
122018_044	W	5927079	OK	OK
122018_045	W	5740156	OK	OK

Analytical Run Worksheet

Run #: 619896
Instrument: K-LCMS-06
Run Status: Draft

CAS Lab: KELSO
Team: Organic LC
Assigned To : CMULLER
Run Date: 12/20/2018

Seq#	Lab Sample ID	Bottle	QC Type	Container Barcode	Client Sample ID	Method / Test / Prep Method	Df	Parent
1	KQ1818316-03	S ,2	MDL		Method Detection Limit	PFC/537M / PFOA / EPA 3550B	1	
2	KQ1818316-04	S ,01	MDL		Method Detection Limit	PFC/537M / PFOA / EPA 3550B	1	
3	KQ1818371-02	W ,8	MDL		Method Detection Limit	PFC/537M / PFOA / EPA 3535A	1	
4	KQ1818482-04	W 1,6	MDL		Method Detection Limit	PFC/537M / PFOA / EPA 3535A	1	

190118_b3_oldcurve

ICAL Date: 1/4/2019
Cal. Std. xp: 3/12/2019
ICAL ID: KC1900007
LIMS ID: 622710

1st Review: Chris Muller
2nd Review: JAN 2 2 2019
Column: LCMS06 -Shimadzu 8050
Phenomenx Kinetex C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 18-OLC-02-68B **B:** 5mM Ammonium Acetate In MeOH 18-OLC-02-68C

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	18-OLC-02-70B	190118_007	PFAS_121918_CM	1x	☒	High MeFOSAA, Low 8:2 surr. Natives ok
2	IB	18-OLC-02-70C	190118_008	PFAS_121918_CM	1x	☒	High MeFOSAA, EtFOSAA surr, ND
3	K1812091-001		190118_009	PFAS_121918_CM	1x	☒	
4	K1812091-005		190118_010	PFAS_121918_CM	1x	☒	
5	K1812224-002		190118_011	PFAS_121918_CM	1x	☒	
6	K1812353-001		190118_012	PFAS_121918_CM	1x	☒	
7	K1812353-002		190118_013	PFAS_121918_CM	1x	☒	
8	KQ1818482-02	DLCS	190118_014	PFAS_121918_CM	1x	☒	
9	R1812115-006		190118_015	PFAS_121918_CM	1x	☒	Report Teda, Trda only

January 04, 2019 Service Request No:R1812171

Lindsay Mitchell
AECOM
40 British American Blvd
Latham, NY 12210

Laboratory Results for: East Hampton Airport

Dear Lindsay,

Enclosed are the results of the sample(s) submitted to our laboratory December 15, 2018
For your reference, these analyses have been assigned our service request number **R1812171.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, 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) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

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

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

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: AECOM
Project: East Hampton Airport
Sample Matrix: Soil, Water

Service Request: R1812171
Date Received: 12/15/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV, validation deliverables including all summary forms and associated raw data. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Three soil, water samples were received for analysis at ALS Environmental on 12/15/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 0 to 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature. If any samples were received for the analysis of pH, chlorine residual, sulfite, dissolved oxygen, or ferrous iron, the samples were analyzed past their holding time expiration since these analyses are required to be analyzed within 15 minutes of sampling.

Semivolatiles by GC/MS:

Method 8270D, 12/20/2018: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Semivoa GC:

Method 8081B, 12/26/2018: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

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.

Volatiles by GC/MS:

No significant anomalies were noted with this analysis.

Approved by _____ Date 01/04/2019

Sample Receipt Information

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

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1812171-001	IDW (water) 121418	12/14/2018	0915
R1812171-002	IDW (soil 1) 121418	12/14/2018	0850
R1812171-003	IDW (soil 2) 121418	12/14/2018	0900

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 54716

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: E. Hampton Airport	Project Number: 60566160
Project Manager: Lindsay Mitchell	Report CC:
Company/Address: AECOM 40 British American Blvd. Latham, NY 12110	
Phone #: 518-384-4212	Email: Lindsay.Mitchell@aecom.com
Sampler's Signature: Greg Dunlavey	Sampler's Printed Name: Greg Dunlavey

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs • 8260 • 624 • CLP	GC/MS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE					0	0	0	0	0	0	0		
IDW (Water) 12/14/18		12/14/18	0915	W	10	X	X	X	X	X	X	X	Composite
IDW (Soil 2) 12/14/18		↓	0850	S	5	X	X	X	X	X	X	X	Composite
IDW (Soil 2) 12/14/18		↓	0900	S	5	X	X	X	X	X	X	X	Composite
Temp. Blank		—	—	—	1								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals - TCLP Metals
Results to: Lindsay.Mitchell@aecom.com

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
X Standard (10 business days-No Surcharge)
REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #:
BILL TO:

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Greg Dunlavey	Signature: Daniel Mac	Signature:	Signature:	Signature:	Signature:
Printed Name: Greg Dunlavey	Printed Name: Daniel Mac	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: AECOM	Firm: ALS	Firm:	Firm:	Firm:	Firm:
Date/Time: 12/14/18 1530	Date/Time: 12/15/18/0900	Date/Time:	Date/Time:	Date/Time:	Date/Time:

R1812171 5
AECOM
East Hampton Airport

Distribution: White - Lab Copy; Yellow - Return to Originator

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R1812171 5
AECOM
East Hampton Airport

Cooler Receipt and Preservation Check Form

Project/Client AECom Folder Number

Cooler received on 12/15/18 by: DM

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: **Wet Ice** **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: 12/15/18 Time: 0931 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	2.4						
Correction Factor (°C)	+0.0						
Corrected Temp (°C)	2.4						
Temp from:Type of bottle							
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: R-02 by SW on 12/15/18 at 0931
5035 samples placed in storage location: by on at

Cooler Breakdown/Preservation Check**: Date: ~~12/15/18~~ 12/18/18 Time: 0950 by:

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? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_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 $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		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: 8-039-001 082418-1SK, 091018-1SK, 100818-1TW
Explain all Discrepancies/ Other Comments:

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
(PH)	(SUB)
SO3	MARRS
ALS	REV

Labels secondary reviewed by:
PC Secondary Review: 12/18/18

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

Miscellaneous Forms

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

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.
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/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
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.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: 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 Certifications[1]

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 laboratoryôs 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.

Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
1010A	Water	Flash Point
9040C	Water	pH

Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160

Sample Name: IDW (water) 121418 **Date Collected:** 12/14/18
Lab Code: R1812171-001 **Date Received:** 12/15/18
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
1010A		BBOWE
6010C	KMCLAEN	NMANSEN
7470A	KMCLAEN	NMANSEN
8081B	VSTAUFFER	AMOSES
8151A	DMURPHY	AMOSES
8260C		FNAEGLER
8270D	DMURPHY	JMISIUREWICZ
9040C		KMENGS

Sample Name: IDW (soil 1) 121418 **Date Collected:** 12/14/18
Lab Code: R1812171-002 **Date Received:** 12/15/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN
7470A	KMCLAEN	NMANSEN
8081B	VSTAUFFER	AMOSES
8151A	DMURPHY	AMOSES
8260C		FNAEGLER
8270D	DMURPHY	JMISIUREWICZ
9045D		KMENGS

Sample Name: IDW (soil 2) 121418 **Date Collected:** 12/14/18
Lab Code: R1812171-003 **Date Received:** 12/15/18
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	KMCLAEN	NMANSEN
7470A	KMCLAEN	NMANSEN
8081B	VSTAUFFER	AMOSES
8151A	DMURPHY	AMOSES
8260C		FNAEGLER

Analyst Summary report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160		

Sample Name:	IDW (soil 2) 121418	**Date Collected:**	12/14/18
Lab Code:	R1812171-003	**Date Received:**	12/15/18
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
8270D	DMURPHY	JMISIUREWICZ
9045D		KMENGS

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

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

Volatile 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

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (water) 121418	**Units:**	ug/L
Lab Code:	R1812171-001	**Basis:**	NA

TCLP Volatile Organics by GC/MS

Analysis Method:	8260C	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 5030C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1-Dichloroethene (1,1-DCE)	ND U	50	10	12/21/18 19:08	
1,2-Dichloroethane	ND U	50	10	12/21/18 19:08	
2-Butanone (MEK)	ND U	100	10	12/21/18 19:08	
Benzene	ND U	50	10	12/21/18 19:08	
Carbon Tetrachloride	ND U	50	10	12/21/18 19:08	
Chlorobenzene	ND U	50	10	12/21/18 19:08	
Chloroform	ND U	50	10	12/21/18 19:08	
Tetrachloroethene (PCE)	ND U	50	10	12/21/18 19:08	
Trichloroethene (TCE)	ND U	50	10	12/21/18 19:08	
Vinyl Chloride	ND U	50	10	12/21/18 19:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	12/21/18 19:08	
Dibromofluoromethane	94	89 - 119	12/21/18 19:08	
Toluene-d8	99	87 - 121	12/21/18 19:08	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 1) 121418	**Units:**	ug/L
Lab Code:	R1812171-002	**Basis:**	As Received

TCLP Volatile Organics by GC/MS

Analysis Method:	8260C	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 5030C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1-Dichloroethene (1,1-DCE)	ND U	50	10	12/21/18 19:31	
1,2-Dichloroethane	ND U	50	10	12/21/18 19:31	
2-Butanone (MEK)	ND U	100	10	12/21/18 19:31	
Benzene	ND U	50	10	12/21/18 19:31	
Carbon Tetrachloride	ND U	50	10	12/21/18 19:31	
Chlorobenzene	ND U	50	10	12/21/18 19:31	
Chloroform	ND U	50	10	12/21/18 19:31	
Tetrachloroethene (PCE)	ND U	50	10	12/21/18 19:31	
Trichloroethene (TCE)	ND U	50	10	12/21/18 19:31	
Vinyl Chloride	ND U	50	10	12/21/18 19:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	85 - 122	12/21/18 19:31	
Dibromofluoromethane	93	89 - 119	12/21/18 19:31	
Toluene-d8	99	87 - 121	12/21/18 19:31	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 2) 121418	**Units:**	ug/L
Lab Code:	R1812171-003	**Basis:**	As Received

TCLP Volatile Organics by GC/MS

Analysis Method:	8260C	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 5030C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1-Dichloroethene (1,1-DCE)	ND U	50	10	12/21/18 19:53	
1,2-Dichloroethane	ND U	50	10	12/21/18 19:53	
2-Butanone (MEK)	ND U	100	10	12/21/18 19:53	
Benzene	ND U	50	10	12/21/18 19:53	
Carbon Tetrachloride	ND U	50	10	12/21/18 19:53	
Chlorobenzene	ND U	50	10	12/21/18 19:53	
Chloroform	ND U	50	10	12/21/18 19:53	
Tetrachloroethene (PCE)	ND U	50	10	12/21/18 19:53	
Trichloroethene (TCE)	ND U	50	10	12/21/18 19:53	
Vinyl Chloride	ND U	50	10	12/21/18 19:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	85 - 122	12/21/18 19:53	
Dibromofluoromethane	95	89 - 119	12/21/18 19:53	
Toluene-d8	100	87 - 121	12/21/18 19:53	

Semivolatile Organic Compounds by GC/MS

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Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (water) 121418	**Units:**	ug/L
Lab Code:	R1812171-001	**Basis:**	NA

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	ND U	100	1	12/20/18 18:49	12/19/18	
2,4,5-Trichlorophenol	ND U	100	1	12/20/18 18:49	12/19/18	
2,4,6-Trichlorophenol	ND U	100	1	12/20/18 18:49	12/19/18	
2,4-Dinitrotoluene	ND U	100	1	12/20/18 18:49	12/19/18	
2-Methylphenol	ND U	100	1	12/20/18 18:49	12/19/18	
3- and 4-Methylphenol Coelution	ND U	100	1	12/20/18 18:49	12/19/18	
Hexachlorobenzene	ND U	100	1	12/20/18 18:49	12/19/18	
Hexachlorobutadiene	ND U	100	1	12/20/18 18:49	12/19/18	
Hexachloroethane	ND U	100	1	12/20/18 18:49	12/19/18	
Nitrobenzene	ND U	100	1	12/20/18 18:49	12/19/18	
Pentachlorophenol (PCP)	ND U	500	1	12/20/18 18:49	12/19/18	
Pyridine	ND U	500	1	12/20/18 18:49	12/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	94	35 - 141	12/20/18 18:49	
2-Fluorobiphenyl	78	31 - 118	12/20/18 18:49	
2-Fluorophenol	35	10 - 105	12/20/18 18:49	
Nitrobenzene-d5	78	31 - 110	12/20/18 18:49	
Phenol-d6	25	10 - 107	12/20/18 18:49	
p-Terphenyl-d14	89	10 - 165	12/20/18 18:49	

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 1) 121418	**Units:**	ug/L
Lab Code:	R1812171-002	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	ND U	100	1	12/20/18 19:17	12/19/18	
2,4,5-Trichlorophenol	ND U	100	1	12/20/18 19:17	12/19/18	
2,4,6-Trichlorophenol	ND U	100	1	12/20/18 19:17	12/19/18	
2,4-Dinitrotoluene	ND U	100	1	12/20/18 19:17	12/19/18	
2-Methylphenol	ND U	100	1	12/20/18 19:17	12/19/18	
3- and 4-Methylphenol Coelution	ND U	100	1	12/20/18 19:17	12/19/18	
Hexachlorobenzene	ND U	100	1	12/20/18 19:17	12/19/18	
Hexachlorobutadiene	ND U	100	1	12/20/18 19:17	12/19/18	
Hexachloroethane	ND U	100	1	12/20/18 19:17	12/19/18	
Nitrobenzene	ND U	100	1	12/20/18 19:17	12/19/18	
Pentachlorophenol (PCP)	ND U	500	1	12/20/18 19:17	12/19/18	
Pyridine	ND U	500	1	12/20/18 19:17	12/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	96	35 - 141	12/20/18 19:17	
2-Fluorobiphenyl	81	31 - 118	12/20/18 19:17	
2-Fluorophenol	41	10 - 105	12/20/18 19:17	
Nitrobenzene-d5	86	31 - 110	12/20/18 19:17	
Phenol-d6	29	10 - 107	12/20/18 19:17	
p-Terphenyl-d14	92	10 - 165	12/20/18 19:17	

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 2) 121418	**Units:**	ug/L
Lab Code:	R1812171-003	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	ND U	100	1	12/20/18 19:46	12/19/18	
2,4,5-Trichlorophenol	ND U	100	1	12/20/18 19:46	12/19/18	
2,4,6-Trichlorophenol	ND U	100	1	12/20/18 19:46	12/19/18	
2,4-Dinitrotoluene	ND U	100	1	12/20/18 19:46	12/19/18	
2-Methylphenol	ND U	100	1	12/20/18 19:46	12/19/18	
3- and 4-Methylphenol Coelution	ND U	100	1	12/20/18 19:46	12/19/18	
Hexachlorobenzene	ND U	100	1	12/20/18 19:46	12/19/18	
Hexachlorobutadiene	ND U	100	1	12/20/18 19:46	12/19/18	
Hexachloroethane	ND U	100	1	12/20/18 19:46	12/19/18	
Nitrobenzene	ND U	100	1	12/20/18 19:46	12/19/18	
Pentachlorophenol (PCP)	ND U	500	1	12/20/18 19:46	12/19/18	
Pyridine	ND U	500	1	12/20/18 19:46	12/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	86	35 - 141	12/20/18 19:46	
2-Fluorobiphenyl	72	31 - 118	12/20/18 19:46	
2-Fluorophenol	38	10 - 105	12/20/18 19:46	
Nitrobenzene-d5	73	31 - 110	12/20/18 19:46	
Phenol-d6	26	10 - 107	12/20/18 19:46	
p-Terphenyl-d14	86	10 - 165	12/20/18 19:46	

Semivolatile Organic Compounds by GC

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Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (water) 121418	**Units:**	ug/L
Lab Code:	R1812171-001	**Basis:**	NA

TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method:	8081B	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chlordane	ND U	2.5	1	12/26/18 16:15	12/20/18	
Endrin	ND U	0.50	1	12/26/18 16:15	12/20/18	
gamma-BHC (Lindane)	ND U	0.50	1	12/26/18 16:15	12/20/18	
Heptachlor	ND U	0.50	1	12/26/18 16:15	12/20/18	
Heptachlor Epoxide	ND U	0.50	1	12/26/18 16:15	12/20/18	
Methoxychlor	ND U	0.50	1	12/26/18 16:15	12/20/18	
Toxaphene	ND U	5.0	1	12/26/18 16:15	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	38	10 - 164	12/26/18 16:15	
Tetrachloro-m-xylene	53	10 - 147	12/26/18 16:15	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 1) 121418	**Units:**	ug/L
Lab Code:	R1812171-002	**Basis:**	As Received

TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method:	8081B	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chlordane	ND U	2.5	1	12/26/18 16:32	12/20/18	
Endrin	ND U	0.50	1	12/26/18 16:32	12/20/18	
gamma-BHC (Lindane)	ND U	0.50	1	12/26/18 16:32	12/20/18	
Heptachlor	ND U	0.50	1	12/26/18 16:32	12/20/18	
Heptachlor Epoxide	ND U	0.50	1	12/26/18 16:32	12/20/18	
Methoxychlor	ND U	0.50	1	12/26/18 16:32	12/20/18	
Toxaphene	ND U	5.0	1	12/26/18 16:32	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	44	10 - 164	12/26/18 16:32	
Tetrachloro-m-xylene	48	10 - 147	12/26/18 16:32	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 2) 121418	**Units:**	ug/L
Lab Code:	R1812171-003	**Basis:**	As Received

TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method:	8081B	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chlordane	ND U	2.5	1	12/26/18 16:50	12/20/18	
Endrin	ND U	0.50	1	12/26/18 16:50	12/20/18	
gamma-BHC (Lindane)	ND U	0.50	1	12/26/18 16:50	12/20/18	
Heptachlor	ND U	0.50	1	12/26/18 16:50	12/20/18	
Heptachlor Epoxide	ND U	0.50	1	12/26/18 16:50	12/20/18	
Methoxychlor	ND U	0.50	1	12/26/18 16:50	12/20/18	
Toxaphene	ND U	5.0	1	12/26/18 16:50	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	43	10 - 164	12/26/18 16:50	
Tetrachloro-m-xylene	52	10 - 147	12/26/18 16:50	

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (water) 121418	**Units:**	ug/L
Lab Code:	R1812171-001	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	5.0	1	12/28/18 11:37	12/20/18	
2,4,5-TP (Silvex)	ND U	5.0	1	12/28/18 11:37	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	42	10 - 136	12/28/18 11:37	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 1) 121418	**Units:**	ug/L
Lab Code:	R1812171-002	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	5.0	1	12/28/18 11:53	12/20/18	
2,4,5-TP (Silvex)	ND U	5.0	1	12/28/18 11:53	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	50	12 - 131	12/28/18 11:53	

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 2) 121418	**Units:**	ug/L
Lab Code:	R1812171-003	**Basis:**	As Received

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	5.0	1	12/28/18 12:11	12/20/18	
2,4,5-TP (Silvex)	ND U	5.0	1	12/28/18 12:11	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	54	12 - 131	12/28/18 12:11	

Metals

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

IDW (water) 121418

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Matrix (soil/water): WATER Lab Sample ID: R1812171-001

Level (low/med): LOW Date Received: 12/15/2018

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	500	U		P
7440-39-3	Barium	1000	U		P
7440-43-9	Cadmium	100	U		P
7439-97-6	Mercury	0.200	U		CV
7440-47-3	Chromium	100	U		P
7439-92-1	Lead	100	U		P
7782-49-2	Selenium	500	U		P
7440-22-4	Silver	100	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

IDW (soil 1) 121418

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Matrix (soil/water): WATER Lab Sample ID: R1812171-002

Level (low/med): LOW Date Received: 12/15/2018

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	500	U		P
7440-39-3	Barium	1000	U		P
7440-43-9	Cadmium	100	U		P
7439-97-6	Mercury	0.200	U		CV
7440-47-3	Chromium	100	U		P
7439-92-1	Lead	100	U		P
7782-49-2	Selenium	500	U		P
7440-22-4	Silver	100	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

IDW (soil 2) 121418

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Matrix (soil/water): WATER Lab Sample ID: R1812171-003

Level (low/med): LOW Date Received: 12/15/2018

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	500	U		P
7440-39-3	Barium	1000	U		P
7440-43-9	Cadmium	100	U		P
7439-97-6	Mercury	0.200	U		CV
7440-47-3	Chromium	100	U		P
7439-92-1	Lead	100	U		P
7782-49-2	Selenium	500	U		P
7440-22-4	Silver	100	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

General Chemistry

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Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:15
Sample Matrix:	Water	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (water) 121418	**Basis:**	NA
Lab Code:	R1812171-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Flash Point	1010A	**>100**	deg C	-	1	12/20/18 10:45	
pH	9040C	**7.89**	pH Units	-	1	12/19/18 14:37	H

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 08:50
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 1) 121418	**Basis:**	As Received
Lab Code:	R1812171-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
pH	9045D	**8.01**	pH Units	-	1	12/21/18 09:00	H

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18 09:00
Sample Matrix:	Soil	**Date Received:**	12/15/18 09:00
Sample Name:	IDW (soil 2) 121418	**Basis:**	As Received
Lab Code:	R1812171-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
pH	9045D	**6.73**	pH Units	-	1	12/21/18 09:00	H

QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
TCLP Volatile Organics by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene 85-122	Dibromofluoromethane 89-119	Toluene-d8 87-121
IDW (water) 121418	R1812171-001	98	94	99
Method Blank	RQ1814202-04	98	97	100
Lab Control Sample	RQ1814202-03	98	99	98

Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Volatile Organics by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene 85-122	Dibromofluoromethane 89-119	Toluene-d8 87-121
IDW (soil 1) 121418	R1812171-002	97	93	99
IDW (soil 2) 121418	R1812171-003	97	95	100
Method Blank	RQ1813953-01	94	91	97
Method Blank	RQ1813953-02	94	91	97
IDW (soil 2) 121418 MS	RQ1814202-05	102	98	99
IDW (soil 2) 121418 DMS	RQ1814202-06	103	100	99

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	12/14/18
Sample Matrix:	Soil	**Date Received:**	12/15/18
		Date Analyzed:	12/21/18
		Date Extracted:	NA

Duplicate Matrix Spike Summary
TCLP Volatile Organics by GC/MS

Sample Name:	IDW (soil 2) 121418	**Units:**	ug/L
Lab Code:	R1812171-003	**Basis:**	As Received
Analysis Method:	8260C		
Prep Method:	EPA 5030C		

		Matrix Spike RQ1814202-05			Duplicate Matrix Spike RQ1814202-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene (1,1-DCE)	ND U	438	500	88	510	500	102	71-118	15	30
1,2-Dichloroethane	ND U	495	500	99	532	500	106	68-130	7	30
2-Butanone (MEK)	ND U	530	500	106	519	500	104	61-137	2	30
Benzene	ND U	452	500	90	505	500	101	76-129	11	30
Carbon Tetrachloride	ND U	420	500	84	496	500	99	65-135	16	30
Chlorobenzene	ND U	423	500	85	478	500	96	76-125	12	30
Chloroform	ND U	480	500	96	534	500	107	75-130	11	30
Tetrachloroethene (PCE)	ND U	406	500	81	467	500	93	72-125	14	30
Trichloroethene (TCE)	ND U	400	500	80	457	500	91	74-122	13	30
Vinyl Chloride	ND U	425	500	85	473	500	95	74-159	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.

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813953-01	**Basis:**	As Received

TCLP Volatile Organics by GC/MS

Analysis Method:	8260C	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 5030C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	12/21/18 18:46	
1,2-Dichloroethane	ND U	5.0	1	12/21/18 18:46	
2-Butanone (MEK)	ND U	10	1	12/21/18 18:46	
Benzene	ND U	5.0	1	12/21/18 18:46	
Carbon Tetrachloride	ND U	5.0	1	12/21/18 18:46	
Chlorobenzene	ND U	5.0	1	12/21/18 18:46	
Chloroform	ND U	5.0	1	12/21/18 18:46	
Tetrachloroethene (PCE)	ND U	5.0	1	12/21/18 18:46	
Trichloroethene (TCE)	ND U	5.0	1	12/21/18 18:46	
Vinyl Chloride	ND U	5.0	1	12/21/18 18:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85 - 122	12/21/18 18:46	
Dibromofluoromethane	91	89 - 119	12/21/18 18:46	
Toluene-d8	97	87 - 121	12/21/18 18:46	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813953-02	**Basis:**	As Received

TCLP Volatile Organics by GC/MS

Analysis Method:	8260C	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 5030C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	12/21/18 18:46	
1,2-Dichloroethane	ND U	5.0	1	12/21/18 18:46	
2-Butanone (MEK)	ND U	10	1	12/21/18 18:46	
Benzene	ND U	5.0	1	12/21/18 18:46	
Carbon Tetrachloride	ND U	5.0	1	12/21/18 18:46	
Chlorobenzene	ND U	5.0	1	12/21/18 18:46	
Chloroform	ND U	5.0	1	12/21/18 18:46	
Tetrachloroethene (PCE)	ND U	5.0	1	12/21/18 18:46	
Trichloroethene (TCE)	ND U	5.0	1	12/21/18 18:46	
Vinyl Chloride	ND U	5.0	1	12/21/18 18:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85 - 122	12/21/18 18:46	
Dibromofluoromethane	91	89 - 119	12/21/18 18:46	
Toluene-d8	97	87 - 121	12/21/18 18:46	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1814202-04	**Basis:**	NA

TCLP Volatile Organics by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1-Dichloroethene (1,1-DCE)	ND U	5.0	1	12/21/18 12:50	
1,2-Dichloroethane	ND U	5.0	1	12/21/18 12:50	
2-Butanone (MEK)	ND U	10	1	12/21/18 12:50	
Benzene	ND U	5.0	1	12/21/18 12:50	
Carbon Tetrachloride	ND U	5.0	1	12/21/18 12:50	
Chlorobenzene	ND U	5.0	1	12/21/18 12:50	
Chloroform	ND U	5.0	1	12/21/18 12:50	
Tetrachloroethene (PCE)	ND U	5.0	1	12/21/18 12:50	
Trichloroethene (TCE)	ND U	5.0	1	12/21/18 12:50	
Vinyl Chloride	ND U	5.0	1	12/21/18 12:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	12/21/18 12:50	
Dibromofluoromethane	97	89 - 119	12/21/18 12:50	
Toluene-d8	100	87 - 121	12/21/18 12:50	

Client: AECOM
Project: East Hampton Airport/60566160
Sample Matrix: Water

Service Request: R1812171
Date Analyzed: 12/21/18

Lab Control Sample Summary
TCLP Volatile Organics by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ1814202-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1-Dichloroethene (1,1-DCE)	8260C	18.8	20.0	94	71-118
1,2-Dichloroethane	8260C	20.6	20.0	103	71-127
2-Butanone (MEK)	8260C	18.1	20.0	90	61-137
Benzene	8260C	18.9	20.0	95	79-119
Carbon Tetrachloride	8260C	17.4	20.0	87	70-127
Chlorobenzene	8260C	17.8	20.0	89	80-121
Chloroform	8260C	20.3	20.0	102	79-120
Tetrachloroethene (PCE)	8260C	16.6	20.0	83	72-125
Trichloroethene (TCE)	8260C	17.0	20.0	85	74-122
Vinyl Chloride	8260C	17.9	20.0	90	74-159

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

Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	2,4,6-Tribromophenol 35-141	2-Fluorobiphenyl 31-118	2-Fluorophenol 10-105
IDW (water) 121418	R1812171-001	94	78	35

Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3510C

Sample Name	Lab Code	Nitrobenzene-d5 31-110	Phenol-d6 10-107	p-Terphenyl-d14 10-165
IDW (water) 121418	R1812171-001	78	25	89

Client: AECOM **Service Request:** R1812171

Project: East Hampton Airport/60566160

Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D

Extraction Method: EPA 3510C

Sample Name	Lab Code	2,4,6-Tribromophenol 35-141	2-Fluorobiphenyl 31-118	2-Fluorophenol 10-105
IDW (soil 1) 121418	R1812171-002	96	81	41
IDW (soil 2) 121418	R1812171-003	86	72	38
Method Blank	RQ1813954-01	88	74	40
Method Blank	RQ1813954-02	88	74	40
Method Blank	RQ1813977-01	93	75	36
Lab Control Sample	RQ1813977-02	94	81	46
Duplicate Lab Control Sample	RQ1813977-03	94	85	47

Client: AECOM **Service Request:** R1812171

Project: East Hampton Airport/60566160

Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D

Extraction Method: EPA 3510C

Sample Name	Lab Code	Nitrobenzene-d5 31-110	Phenol-d6 10-107	p-Terphenyl-d14 10-165
IDW (soil 1) 121418	R1812171-002	86	29	92
IDW (soil 2) 121418	R1812171-003	73	26	86
Method Blank	RQ1813954-01	74	29	87
Method Blank	RQ1813954-02	74	29	87
Method Blank	RQ1813977-01	84	27	82
Lab Control Sample	RQ1813977-02	88	33	89
Duplicate Lab Control Sample	RQ1813977-03	91	34	87

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Pre-Prep Date:	12/18/18
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1813954-01	**Basis:**	As Received

Toxicity Characteristics Leachate Procedure (TCLP)
TCLP Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270D
Prep Method: EPA 3510C
Pre-Prep Method: EPA 1311

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,4-Dichlorobenzene	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
2,4,5-Trichlorophenol	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
2,4,6-Trichlorophenol	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
2,4-Dinitrotoluene	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
2-Methylphenol	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
3- and 4-Methylphenol Coelution	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
Hexachlorobenzene	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
Hexachlorobutadiene	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
Hexachloroethane	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
Nitrobenzene	ND	U	100	1	12/19/18	12/20/18 17:51	328576	619771	
Pentachlorophenol (PCP)	ND	U	500	1	12/19/18	12/20/18 17:51	328576	619771	
Pyridine	ND	U	500	1	12/19/18	12/20/18 17:51	328576	619771	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	88	35-141	12/20/18 17:51	
2-Fluorobiphenyl	74	31-118	12/20/18 17:51	
2-Fluorophenol	40	10-105	12/20/18 17:51	
Nitrobenzene-d5	74	31-110	12/20/18 17:51	
Phenol-d6	29	10-107	12/20/18 17:51	
p-Terphenyl-d14	87	10-165	12/20/18 17:51	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813954-02	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method:	8270D	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	ND U	100	1	12/20/18 17:51	12/19/18	
2,4,5-Trichlorophenol	ND U	100	1	12/20/18 17:51	12/19/18	
2,4,6-Trichlorophenol	ND U	100	1	12/20/18 17:51	12/19/18	
2,4-Dinitrotoluene	ND U	100	1	12/20/18 17:51	12/19/18	
2-Methylphenol	ND U	100	1	12/20/18 17:51	12/19/18	
3- and 4-Methylphenol Coelution	ND U	100	1	12/20/18 17:51	12/19/18	
Hexachlorobenzene	ND U	100	1	12/20/18 17:51	12/19/18	
Hexachlorobutadiene	ND U	100	1	12/20/18 17:51	12/19/18	
Hexachloroethane	ND U	100	1	12/20/18 17:51	12/19/18	
Nitrobenzene	ND U	100	1	12/20/18 17:51	12/19/18	
Pentachlorophenol (PCP)	ND U	500	1	12/20/18 17:51	12/19/18	
Pyridine	ND U	500	1	12/20/18 17:51	12/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	88	35 - 141	12/20/18 17:51	
2-Fluorobiphenyl	74	31 - 118	12/20/18 17:51	
2-Fluorophenol	40	10 - 105	12/20/18 17:51	
Nitrobenzene-d5	74	31 - 110	12/20/18 17:51	
Phenol-d6	29	10 - 107	12/20/18 17:51	
p-Terphenyl-d14	87	10 - 165	12/20/18 17:51	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813977-01	**Basis:**	As Received

TCLP Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dichlorobenzene	ND U	100	1	12/20/18 09:42	12/19/18	
2,4,5-Trichlorophenol	ND U	100	1	12/20/18 09:42	12/19/18	
2,4,6-Trichlorophenol	ND U	100	1	12/20/18 09:42	12/19/18	
2,4-Dinitrotoluene	ND U	100	1	12/20/18 09:42	12/19/18	
2-Methylphenol	ND U	100	1	12/20/18 09:42	12/19/18	
3- and 4-Methylphenol Coelution	ND U	100	1	12/20/18 09:42	12/19/18	
Hexachlorobenzene	ND U	100	1	12/20/18 09:42	12/19/18	
Hexachlorobutadiene	ND U	100	1	12/20/18 09:42	12/19/18	
Hexachloroethane	ND U	100	1	12/20/18 09:42	12/19/18	
Nitrobenzene	ND U	100	1	12/20/18 09:42	12/19/18	
Pentachlorophenol (PCP)	ND U	500	1	12/20/18 09:42	12/19/18	
Pyridine	ND U	500	1	12/20/18 09:42	12/19/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	93	35 - 141	12/20/18 09:42	
2-Fluorobiphenyl	75	31 - 118	12/20/18 09:42	
2-Fluorophenol	36	10 - 105	12/20/18 09:42	
Nitrobenzene-d5	84	31 - 110	12/20/18 09:42	
Phenol-d6	27	10 - 107	12/20/18 09:42	
p-Terphenyl-d14	82	10 - 165	12/20/18 09:42	

Client: AECOM
Project: East Hampton Airport/60566160
Sample Matrix: Soil

Service Request: R1812171
Date Analyzed: 12/20/18

Duplicate Lab Control Sample Summary
TCLP Semivolatile Organic Compounds by GC/MS

Units:ug/L
Basis: As Received

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ1813977-02			RQ1813977-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,4-Dichlorobenzene	8270D	280	500	56	315	500	63	10-124	12	30
2,4,5-Trichlorophenol	8270D	381	500	76	491	500	98	48-134	25	30
2,4,6-Trichlorophenol	8270D	358	500	72	459	500	92	44-135	25	30
2,4-Dinitrotoluene	8270D	403	500	81	526	500	105	54-130	26	30
2-Methylphenol	8270D	273	500	55	347	500	69	47-100	24	30
3- and 4-Methylphenol Coelution	8270D	260	500	52	342	500	68	40-92	27	30
Hexachlorobenzene	8270D	416	500	83	478	500	96	53-123	14	30
Hexachlorobutadiene	8270D	350	500	70	388	500	78	16-95	10	30
Hexachloroethane	8270D	266	500	53	290	500	58	15-92	9	30
Nitrobenzene	8270D	348	500	70	430	500	86	46-108	21	30
Pentachlorophenol (PCP)	8270D	340 J	500	68	398 J	500	80	29-164	16	30
Pyridine	8270D	132 J	500	26	151 J	500	30	10-123	13	30

Semivolatile Organic Compounds by GC

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: AECOM **Service Request:** R1812171

Project: East Hampton Airport/60566160

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B

Extraction Method: EPA 3510C

Sample Name	Lab Code	Decachlorobiphenyl 10-164	Tetrachloro-m-xylene 10-147
IDW (water) 121418	R1812171-001	38	53
Method Blank	RQ1814017-01	50	55
Lab Control Sample	RQ1814017-02	42	60
Duplicate Lab Control Sample	RQ1814017-03	40	52

Client: AECOM **Service Request:** R1812171
Project: East Hampton Airport/60566160
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Extraction Method: EPA 3510C

Sample Name	Lab Code	Decachlorobiphenyl 10-164	Tetrachloro-m-xylene 10-147
IDW (soil 1) 121418	R1812171-002	44	48
IDW (soil 2) 121418	R1812171-003	43	52
Method Blank	RQ1813954-01	36	38
Method Blank	RQ1813954-02	36	38

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813954-01	**Basis:**	As Received

TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method:	8081B	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chlordane	ND U	2.5	1	12/26/18 18:17	12/20/18	
Endrin	ND U	0.50	1	12/26/18 18:17	12/20/18	
gamma-BHC (Lindane)	ND U	0.50	1	12/26/18 18:17	12/20/18	
Heptachlor	ND U	0.50	1	12/26/18 18:17	12/20/18	
Heptachlor Epoxide	ND U	0.50	1	12/26/18 18:17	12/20/18	
Methoxychlor	ND U	0.50	1	12/26/18 18:17	12/20/18	
Toxaphene	ND U	5.0	1	12/26/18 18:17	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	36	10 - 164	12/26/18 18:17	
Tetrachloro-m-xylene	38	10 - 147	12/26/18 18:17	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813954-02	**Basis:**	As Received

TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method:	8081B	**Pre-Prep Method:**	EPA 1311
Prep Method:	EPA 3510C	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chlordane	ND U	2.5	1	12/26/18 18:17	12/20/18	
Endrin	ND U	0.50	1	12/26/18 18:17	12/20/18	
gamma-BHC (Lindane)	ND U	0.50	1	12/26/18 18:17	12/20/18	
Heptachlor	ND U	0.50	1	12/26/18 18:17	12/20/18	
Heptachlor Epoxide	ND U	0.50	1	12/26/18 18:17	12/20/18	
Methoxychlor	ND U	0.50	1	12/26/18 18:17	12/20/18	
Toxaphene	ND U	5.0	1	12/26/18 18:17	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	36	10 - 164	12/26/18 18:17	
Tetrachloro-m-xylene	38	10 - 147	12/26/18 18:17	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1814017-01	**Basis:**	NA

TCLP Organochlorine Pesticides by Gas Chromatography

Analysis Method: 8081B
Prep Method: EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Chlordane	ND U	2.5	1	12/26/18 18:35	12/20/18	
Endrin	ND U	0.50	1	12/26/18 18:35	12/20/18	
gamma-BHC (Lindane)	ND U	0.50	1	12/26/18 18:35	12/20/18	
Heptachlor	ND U	0.50	1	12/26/18 18:35	12/20/18	
Heptachlor Epoxide	ND U	0.50	1	12/26/18 18:35	12/20/18	
Methoxychlor	ND U	0.50	1	12/26/18 18:35	12/20/18	
Toxaphene	ND U	5.0	1	12/26/18 18:35	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	50	10 - 164	12/26/18 18:35	
Tetrachloro-m-xylene	55	10 - 147	12/26/18 18:35	

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QA/QC Report

Client: AECOM
Project: East Hampton Airport/60566160
Sample Matrix: Water

Service Request: R1812171
Date Analyzed: 12/26/18

Duplicate Lab Control Sample Summary
TCLP Organochlorine Pesticides by Gas Chromatography

Units:ug/L
Basis:NA

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ1814017-02			RQ1814017-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Endrin	8081B	1.57	2.00	79	1.43	2.00	71	56-143	10	30
gamma-BHC (Lindane)	8081B	1.47	2.00	74	1.28	2.00	64	41-149	14	30
Heptachlor	8081B	1.39	2.00	69	1.18	2.00	59	32-141	17	30
Heptachlor Epoxide	8081B	1.57	2.00	79	1.39	2.00	70	51-143	12	30
Methoxychlor	8081B	1.88	2.00	94	1.82	2.00	91	56-149	3	30

Client: AECOM **Service Request:** R1812171

Project: East Hampton Airport/60566160

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A

Extraction Method: Method

Sample Name	Lab Code	DCAA 10-136
IDW (water) 121418	R1812171-001	42
Method Blank	RQ1813954-01	58
Method Blank	RQ1813954-02	58
Method Blank	RQ1814015-01	52
Lab Control Sample	RQ1814015-02	53
Duplicate Lab Control Sample	RQ1814015-03	57

Client: AECOM **Service Request:** R1812171

Project: East Hampton Airport/60566160

Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A

Extraction Method: Method

Sample Name	Lab Code	DCAA 10-136
IDW (soil 1) 121418	R1812171-002	50
IDW (soil 2) 121418	R1812171-003	54

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813954-01	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	5.0	1	12/28/18 12:27	12/20/18	
2,4,5-TP (Silvex)	ND U	5.0	1	12/28/18 12:27	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	58	10 - 136	12/28/18 12:27	

Analytical Report

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1813954-02	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method:	8151A	**Pre-Prep Method:**	EPA 1311
Prep Method:	Method	**Pre-Prep Date:**	12/18/18

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	5.0	1	12/28/18 12:27	12/20/18	
2,4,5-TP (Silvex)	ND U	5.0	1	12/28/18 12:27	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	58	10 - 136	12/28/18 12:27	

Client:	AECOM	**Service Request:**	R1812171
Project:	East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ1814015-01	**Basis:**	NA

TCLP Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
2,4-D	ND U	5.0	1	12/28/18 12:44	12/20/18	
2,4,5-TP (Silvex)	ND U	5.0	1	12/28/18 12:44	12/20/18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
DCAA	52	10 - 136	12/28/18 12:44	

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QA/QC Report

Client: AECOM
Project: East Hampton Airport/60566160
Sample Matrix: Water

Service Request: R1812171
Date Analyzed: 12/28/18

Duplicate Lab Control Sample Summary
TCLP Chlorinated Herbicides by GC

Units:ug/L
Basis:NA

			Lab Control Sample		Duplicate Lab Control Sample					
			RQ1814015-02		RQ1814015-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,4-D	8151A	14.1	25.0	56	15.5	25.0	62	26-154	10	30
2,4,5-TP (Silvex)	8151A	14.2	25.0	57	15.4	25.0	62	21-120	8	30

Metals

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METALS

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BLANKS

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): UG/L

Analyte	Initial Calib. Blank ug/L	C	Continuing Calibration Blank ug/L 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic	500.00	U	500.00	U	500.00	U	500.00	U	500.000	U	P
Barium	1000.00	U	1000.00	U	1000.00	U	1000.00	U	1000.000	U	P
Cadmium	100.00	U	100.00	U	100.00	U	100.00	U	100.000	U	P
Mercury	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	CV
Chromium	100.00	U	100.00	U	100.00	U	100.00	U	100.000	U	P
Lead	100.00	U	100.00	U	100.00	U	100.00	U	100.000	U	P
Selenium	500.00	U	500.00	U	500.00	U	500.00	U	500.000	U	P
Silver	100.00	U	100.00	U	100.00	U	100.00	U	100.000	U	P

Comments:

METALS

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BLANKS

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L, ppt, or mg/kg): UG/L

Analyte	Initial Calib. Blank ug/L	C	Continuing Calibration Blank ug/L 1	C	2	C	3	C	Preparation Blank	C	M
Arsenic			500.00	U	500.00	U					P
Barium			1000.00	U	1000.00	U					P
Cadmium			100.00	U	100.00	U					P
Mercury			0.200	U							CV
Chromium			100.00	U	100.00	U					P
Lead			100.00	U	100.00	U					P
Selenium			500.00	U	500.00	U					P
Silver			100.00	U	100.00	U					P

Comments:

METALS

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SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDW (soil 2) 121418S

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75 - 125	1020.00		500.00	U	1000.0	102		P
Barium	75 - 125	1920.00		1000.00	U	2000.0	96		P
Cadmium	75 - 125	474.00		100.00	U	500.0	95		P
Chromium	75 - 125	476.00		100.00	U	500.0	95		P
Lead	75 - 125	463.00		100.00	U	500.0	93		P
Selenium	75 - 125	1050.00		500.00	U	1000.0	105		P
Silver	75 - 125	239.00		100.00	U	250.0	96		P

Comments:

METALS

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SPIKE SAMPLE RECOVERY

SAMPLE NO.

IDW (soil 2) 121418SD

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75 - 125	999.00		500.00	U	1000.0	100		P
Barium	75 - 125	1930.00		1000.00	U	2000.0	96		P
Cadmium	75 - 125	472.00		100.00	U	500.0	94		P
Chromium	75 - 125	476.00		100.00	U	500.0	95		P
Lead	75 - 125	465.00		100.00	U	500.0	93		P
Selenium	75 - 125	1040.00		500.00	U	1000.0	104		P
Silver	75 - 125	237.00		100.00	U	250.0	95		P

Comments:

METALS
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DUPLICATES

SAMPLE NO.

IDW (soil 2) 121418SD

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Arsenic		1020.00		999.00		2		P
Barium		1920.00		1930.00		1		P
Cadmium		474.00		472.00		0		P
Chromium		476.00		476.00		0		P
Lead		463.00		465.00		0		P
Selenium		1050.00		1040.00		1		P
Silver		239.00		237.00		1		P

Comments:

METALS

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LABORATORY CONTROL SAMPLE

Contract: R1812171

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: IDW (water) 1

Solid LCS Source: _____

Aqueous LCS Source: CPI

Analyte	Aqueous (ug/L			Solid (mg/K				
	True	Found	%R	True	Found	C	Limits	%R
Arsenic	1000	989	99					
Barium	2000	2080	104					
Cadmium	500	514	103					
Mercury	1.000	0.986	99					
Chromium	500	517	103					
Lead	500	522	104					
Selenium	1000	1020	102					
Silver	250	249	100					

Comments: _____

General Chemistry

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QA/QC Report

Client:	AECOM	**Service Request:**	R1812171
Project	East Hampton Airport/60566160	**Date Collected:**	12/14/18
Sample Matrix:	Soil	**Date Received:**	12/15/18
		Date Analyzed:	12/21/18

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	IDW (soil 2) 121418	**Units:**	pH Units
Lab Code:	R1812171-003	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample R1812171-003DUP Result	Average	RPD	RPD Limit
pH	9045D	-	6.73	6.80	6.77	1 *	0.10

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.

Client: AECOM
Project: East Hampton Airport/60566160
Sample Matrix: Water

Service Request: R1812171
Date Analyzed: 12/20/18

Lab Control Sample Summary
General Chemistry Parameters

Units: deg C
Basis: NA

Lab Control Sample
RQ1814035-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Flash Point	1010A	27.6	27.2		24.48-29.92

Subcontracted Analytical Parameters

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

December 31, 2018

Reports and Invoices
ALS Environmental
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Building 300, Suite 360
Rochester, NY 14623

Certificate of Analysis

Project Name:	**CUST EDD, No QC, MDL**	Workorder:	**3007270**
Purchase Order:	**R1700812**	Workorder ID:	**R1812171**

Dear Reports Invoices:

Enclosed are the analytical results for samples received by the laboratory on Friday, December 21, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Brady Kalkman , Ms. Janice Jaeger

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3007270 R1812171

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3007270001	IDW (water) 121418	Water	12/14/2018 09:15	12/21/2018 10:42	Collected by Client
3007270002	IDW (soil 1) 121418	Solid	12/14/2018 08:50	12/21/2018 10:42	Collected by Client
3007270003	IDW (soil 2) 121418	Solid	12/14/2018 09:00	12/21/2018 10:42	Collected by Client

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SAMPLE SUMMARY

Workorder: 3007270 R1812171

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 3007270 R1812171

Sample Comments

Lab ID: 3007270002 **Sample ID:** IDW (soil 1) 121418 **Sample Type:** SAMPLE

The analysis for ignitability is performed using a modified method 1010A that provides a flashpoint temperature for a solid sample.

Lab ID: 3007270003 **Sample ID:** IDW (soil 2) 121418 **Sample Type:** SAMPLE

The analysis for ignitability is performed using a modified method 1010A that provides a flashpoint temperature for a solid sample.

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ANALYTICAL RESULTS

Workorder: 3007270 R1812171

Lab ID: **3007270001** Date Collected: 12/14/2018 09:15 Matrix: Water

Sample ID: **IDW (water) 121418** Date Received: 12/21/2018 10:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Reactive	ND		ppm	10	0.011	SW-846 7.3CN	12/23/18 06:45	VXF	12/24/18 05:41	KXK	A
Sulfide, Reactive	2.4J	J	ppm	6.2	1.4	SW846 7.3	12/23/18 06:45	VXF	12/23/18 11:15	VXF	A

Ms. Sarah S Leung
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3007270 R1812171

Lab ID: **3007270002** Date Collected: 12/14/2018 08:50 Matrix: Solid

Sample ID: **IDW (soil 1) 121418** Date Received: 12/21/2018 10:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Reactive	ND		ppm	10	0.011	SW-846 7.3CN	12/23/18 06:45	VXF	12/24/18 05:41	KXK	A
Ignitability	See comment	1,2	Deg. F			SW-846 1010AM			12/29/18 07:30	SDL	A
Moisture	3.8		%	0.1	0.01	S2540G-11			12/24/18 11:45	AXD	
Sulfide, Reactive	1.6J	J	ppm	6.2	1.4	SW846 7.3	12/23/18 06:45	VXF	12/23/18 11:15	VXF	A
Total Solids	96.2		%	0.1	0.01	S2540G-11			12/24/18 11:45	AXD	

Ms. Sarah S Leung
Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3007270 R1812171

Lab ID: **3007270003** Date Collected: 12/14/2018 09:00 Matrix: Solid

Sample ID: **IDW (soil 2) 121418** Date Received: 12/21/2018 10:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Reactive	ND		ppm	10	0.011	SW-846 7.3CN	12/23/18 06:45	VXF	12/24/18 05:41	KXK	A
Ignitability	See comment	1,2	Deg. F			SW-846 1010AM			12/29/18 07:30	SDL	A
Moisture	3.9		%	0.1	0.01	S2540G-11			12/24/18 11:45	AXD	
Sulfide, Reactive	4.4J	J	ppm	6.2	1.4	SW846 7.3	12/23/18 06:45	VXF	12/23/18 11:15	VXF	A
Total Solids	96.1		%	0.1	0.01	S2540G-11			12/24/18 11:45	AXD	

Ms. Sarah S Leung
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3007270 R1812171

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3007270002	1	IDW (soil 1) 121418	SW-846 1010AM	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3007270002	2	IDW (soil 1) 121418	SW-846 1010AM	Ignitability
Sample did not flash up to 200 degrees F				
3007270003	1	IDW (soil 2) 121418	SW-846 1010AM	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3007270003	2	IDW (soil 2) 121418	SW-846 1010AM	Ignitability
Sample did not flash up to 200 degrees F				

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3007270 R1812171

Lab ID	Sample ID	Analysis Method	Prep Method
3007270001	IDW (water) 121418	SW-846 7.3CN	SW-846 7.3CN
3007270001	IDW (water) 121418	SW846 7.3	SW846 7.3
3007270002	IDW (soil 1) 121418	S2540G-11	
3007270002	IDW (soil 1) 121418	SW-846 1010AM	
3007270002	IDW (soil 1) 121418	SW-846 7.3CN	SW-846 7.3CN
3007270002	IDW (soil 1) 121418	SW846 7.3	SW846 7.3
3007270003	IDW (soil 2) 121418	S2540G-11	
3007270003	IDW (soil 2) 121418	SW-846 1010AM	
3007270003	IDW (soil 2) 121418	SW-846 7.3CN	SW-846 7.3CN
3007270003	IDW (soil 2) 121418	SW846 7.3	SW846 7.3

ALS Environmental Chain of Custody

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ALS Contact: Janice Jaeger

3007270

Project Number: R1812171
Project Manager: Janice Jaeger
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CN React 9014	Flash 1010A Modified	Sulfide React 9034 Modified
R1812171-001	IDW (water) 121418	1	Water	12/14/18	0915	Middletown ALS	X		X
R1812171-002	IDW (soil 1) 121418	2	Soil	12/14/18	0850	Middletown ALS	X	X	X
R1812171-003	IDW (soil 2) 121418	2	Soil	12/14/18	0900	Middletown ALS	X	X	X

Special Instructions/Comments

SR 12/21/18 1646

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS
1 2 3 4 5

____ **STANDARD**

Requested FAX Date: _____

Requested Report Date: 12/26/18

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 N
EDD Y

Invoice Information

PO# 58R1812171

Bill to

Relinquished By: [signature] 12/20/18 1738

COMMON COURIER / ALS COURIER

Received By: COMMON COURIER / ALS COURIER [signature] 12/21/18 1042

Airbill Number:

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: ALS Rochester | Work Order #: 3007270 | Initials: gw | Date: 12/21/18

1. Were airbills / tracking numbers present and recorded? Tracking number: 4150 9194 1460	NONE	(YES)	NO
2. Are Custody Seals on shipping containers intact?	NONE	(YES)	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		YES	(NO)
5d. Does the COC note the type(s) of preservation for all bottles?		YES	(NO)
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		YES	(NO)
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken or leaking, frozen, etc.)		(YES)	NO
10. Did we received trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples reportable? If yes, fill out Reportable Drinking Water questions below.		YES	(NO)
13a. Did the client provide a PWS ID#?	(N/A)	YES	NO
13b. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13c. Did the client provide the sample location ID/Description?	(N/A)	YES	(NO)
13d. Did the client provide the sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #:
Temperature (°C): 5 °C
Thermometer ID: 403

COMMENTS (Required for all NO responses above and any sample non-conformance):
Information missing, COC from one of our labs - gw 12/21/18

ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
EAST HAMPTON AIRPORT, WAINSCOTT, NEW YORK

Client: AECOM Technical Services, Inc., Latham, New York
SDG: K1902064
Laboratory: ALS Environmental, Kelso, Washington
Site: East Hampton Airport, Wainscott, New York
Date: May 13, 2019

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	EH-B1 030419	K1902064-001	Water
2	EH-162 030419	K1902064-002	Water
3	FIELD BLANK 030419	K1902064-003	Water
4	EQUIPMENT BLANK 030419	K1902064-004	Water
5	EH-1 030419	K1902064-005	Water
6	DUP	K1902064-006	Water
7	EH-19A 030519	K1902064-007	Water
8	EH-19A2 030519	K1902064-008	Water
9	FIELD BLANK 030519	K1902064-009	Water
10	EH-19B 030519	K1902064-010	Water
10MS	EH-19B 030519MS	K1902064-010MS	Water
10MSD	EH-19B 030519MSD	K1902064-010MSD	Water
11	EQUIPMENT BLANK 030519	K1902064-011	Water

A Data Usability Summary Review was performed on the analytical data for seven water samples, two aqueous equipment blank samples, and two aqueous field blank samples collected on March 4-5, 2019 by AECOM at the East Hampton Airport site in Wainscott, New York. The samples were analyzed under the EPA Method "Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
PFCs	USEPA Method 537 Modified

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods and the USEPA Data Review and Validation Guidelines as follows:

- The USEPA "Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537," November 2018;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Laboratory Fortified Blank (LFB)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

Data Usability Assessment

There were no rejections of data.

Overall the data are acceptable for the intended purposes as qualified for the data quality indicator criteria as detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

Perfluorinated Compounds (PFCs)

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent difference (%D) criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
FIELD BLANK 030419	None - ND	-	-	-
EQUIPMENT BLANK 030419	None - ND	-	-	-
FIELD BLANK 030519	None - ND	-	-	-
EQUIPMENT BLANK 030519	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Laboratory Fortified Blank (LFB)

- The LFB samples exhibited acceptable percent recoveries (%R).

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples that exhibited percent recoveries (%R) outside the QC limits and/or relative percent differences (RPD) above QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J).

MS/MSD Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier
10	PFBS	OK/362%/OK	None - 4X Rule Applies
	PFHxS	856%/2026%/OK	
	PFOS	OK/176%/OK	J
	PFBA	OK/267%/OK	None - 4X Rule Applies

MS/MSD Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier
10	PFPeA	228%/602%/OK	None - 4X Rule Applies
	PFHxA	168%/566%/OK	
	PFHpA	165%/431%/OK	
	PFOA	OK/242%/OK	
	6:2FTS	OK/252%/OK	

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Samples 7 and 10 were analyzed at a 10X dilution due to high concentrations of several compounds. The reporting limits were adjusted according. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

PFCs				
Compound	EH-162 030419 ng/L	DUP ng/L	RPD	Qualifier
PFBS	4.1	3.8	8%	None
PFHxS	32	35	9%	
PFHpS	1.8	1.9	5%	
PFOS	130	120	8%	
PFBA	3.9	4.2	7%	
PFPeA	2.9	3.1	7%	
PFHpA	3.3	3.7	11%	
PFOA	9.5	9.1	4%	
6:2 FTS	4.5	3.7	20%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 5/13/19

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

1

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 10:40
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-B1 030419	**Units:**	ng/L
Lab Code:	K1902064-001	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**4.1 J**	4.4	0.28	1	03/19/19 12:45	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**57**	4.4	1.3	1	03/19/19 12:45	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**5.0**	4.4	0.44	1	03/19/19 12:45	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**110**	1.8	0.44	1	03/19/19 12:45	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.4	0.30	1	03/19/19 12:45	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**13**	4.4	0.40	1	03/19/19 12:45	3/18/19	
Perfluoropentanoic acid (PFPeA)	**20**	4.4	1.7	1	03/19/19 12:45	3/18/19	
Perfluorohexanoic acid (PFHxA)	**32**	9.2	8.8	1	03/19/19 12:45	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**9.8**	4.4	0.63	1	03/19/19 12:45	3/18/19	
Perfluorooctanoic acid (PFOA)	**25**	1.8	0.35	1	03/19/19 12:45	3/18/19	
Perfluorononanoic acid (PFNA)	**1.4 J**	4.4	1.1	1	03/19/19 12:45	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.4	1.2	1	03/19/19 12:45	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.4	1.5	1	03/19/19 12:45	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.4	1.3	1	03/19/19 12:45	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.4	1.3	1	03/19/19 12:45	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.4	2.0	1	03/19/19 12:45	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.4	0.52	1	03/19/19 12:45	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.4	1.4	1	03/19/19 12:45	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.4	0.50	1	03/19/19 12:45	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**7.1**	4.4	0.55	1	03/19/19 12:45	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.4	0.15	1	03/19/19 12:45	3/18/19	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

2

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 11:50
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-162 030419	**Units:**	ng/L
Lab Code:	K1902064-002	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**4.1 J**	4.2	0.28	1	03/19/19 12:55	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**32**	4.2	1.3	1	03/19/19 12:55	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**1.8 J**	4.2	0.44	1	03/19/19 12:55	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**130**	1.7	0.44	1	03/19/19 12:55	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 12:55	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**3.9 J**	4.2	0.40	1	03/19/19 12:55	3/18/19	
Perfluoropentanoic acid (PFPeA)	**2.9 J**	4.2	1.7	1	03/19/19 12:55	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 12:55	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**3.3 J**	4.2	0.63	1	03/19/19 12:55	3/18/19	
Perfluorooctanoic acid (PFOA)	**9.5**	1.7	0.35	1	03/19/19 12:55	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.2	1.1	1	03/19/19 12:55	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.2	1.2	1	03/19/19 12:55	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.2	1.5	1	03/19/19 12:55	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 12:55	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 12:55	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 12:55	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 12:55	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 12:55	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 12:55	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**4.5**	4.2	0.55	1	03/19/19 12:55	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.2	0.15	1	03/19/19 12:55	3/18/19	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

3

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 11:55
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Field Blank 030419	**Units:**	ng/L
Lab Code:	K1902064-003	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.2	0.28	1	03/19/19 13:05	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.2	1.3	1	03/19/19 13:05	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.2	0.44	1	03/19/19 13:05	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.7	0.44	1	03/19/19 13:05	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 13:05	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.2	0.40	1	03/19/19 13:05	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.2	1.7	1	03/19/19 13:05	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 13:05	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.2	0.63	1	03/19/19 13:05	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.7	0.35	1	03/19/19 13:05	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.2	1.1	1	03/19/19 13:05	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.2	1.2	1	03/19/19 13:05	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.2	1.5	1	03/19/19 13:05	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 13:05	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 13:05	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 13:05	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 13:05	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 13:05	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 13:05	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.2	0.55	1	03/19/19 13:05	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.2	0.15	1	03/19/19 13:05	3/18/19	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

4

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 12:00
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Equipment Blank 030419	**Units:**	ng/L
Lab Code:	K1902064-004	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.4	0.28	1	03/19/19 13:16	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.4	1.3	1	03/19/19 13:16	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.4	0.44	1	03/19/19 13:16	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.8	0.44	1	03/19/19 13:16	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.4	0.30	1	03/19/19 13:16	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.4	0.40	1	03/19/19 13:16	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.4	1.7	1	03/19/19 13:16	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 13:16	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.4	0.63	1	03/19/19 13:16	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.8	0.35	1	03/19/19 13:16	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.4	1.1	1	03/19/19 13:16	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.4	1.2	1	03/19/19 13:16	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.4	1.5	1	03/19/19 13:16	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.4	1.3	1	03/19/19 13:16	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.4	1.3	1	03/19/19 13:16	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.4	2.0	1	03/19/19 13:16	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.4	0.52	1	03/19/19 13:16	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.4	1.4	1	03/19/19 13:16	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.4	0.50	1	03/19/19 13:16	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.4	0.55	1	03/19/19 13:16	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.4	0.15	1	03/19/19 13:16	3/18/19	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 13:55
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-1 030419	**Units:**	ng/L
Lab Code:	K1902064-005	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**8.8**	4.2	0.28	1	03/19/19 13:26	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**25**	4.2	1.3	1	03/19/19 13:26	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**0.72 J**	4.2	0.44	1	03/19/19 13:26	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**0.99 J**	1.7	0.44	1	03/19/19 13:26	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 13:26	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**43**	4.2	0.40	1	03/19/19 13:26	3/18/19	
Perfluoropentanoic acid (PFPeA)	**110**	4.2	1.7	1	03/19/19 13:26	3/18/19	
Perfluorohexanoic acid (PFHxA)	**110**	9.2	8.8	1	03/19/19 13:26	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**30**	4.2	0.63	1	03/19/19 13:26	3/18/19	
Perfluorooctanoic acid (PFOA)	**6.0**	1.7	0.35	1	03/19/19 13:26	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.2	1.1	1	03/19/19 13:26	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.2	1.2	1	03/19/19 13:26	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.2	1.5	1	03/19/19 13:26	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 13:26	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 13:26	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 13:26	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 13:26	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 13:26	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 13:26	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**3.0 J**	4.2	0.55	1	03/19/19 13:26	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.2	0.15	1	03/19/19 13:26	3/18/19	

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Analytical Report

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Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	DUP	**Units:**	ng/L
Lab Code:	K1902064-006	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**3.8 J**	4.1	0.28	1	03/19/19 13:37	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**35**	4.1	1.3	1	03/19/19 13:37	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**1.9 J**	4.1	0.44	1	03/19/19 13:37	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**120**	1.6	0.44	1	03/19/19 13:37	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.1	0.30	1	03/19/19 13:37	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**4.2**	4.1	0.40	1	03/19/19 13:37	3/18/19	
Perfluoropentanoic acid (PFPeA)	**3.1 J**	4.1	1.7	1	03/19/19 13:37	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 13:37	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**3.7 J**	4.1	0.63	1	03/19/19 13:37	3/18/19	
Perfluorooctanoic acid (PFOA)	**9.1**	1.6	0.35	1	03/19/19 13:37	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.1	1.1	1	03/19/19 13:37	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.1	1.2	1	03/19/19 13:37	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.1	1.5	1	03/19/19 13:37	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.1	1.3	1	03/19/19 13:37	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.1	1.3	1	03/19/19 13:37	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.1	2.0	1	03/19/19 13:37	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.1	0.52	1	03/19/19 13:37	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.1	1.4	1	03/19/19 13:37	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.1	0.50	1	03/19/19 13:37	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**3.7 J**	4.1	0.55	1	03/19/19 13:37	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.1	0.15	1	03/19/19 13:37	3/18/19	

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Analytical Report

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Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 11:00
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19A 030519	**Units:**	ng/L
Lab Code:	K1902064-007	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**40**	3.9	0.28	1	03/19/19 13:47	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**150**	3.9	1.3	1	03/19/19 13:47	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	3.9	0.44	1	03/19/19 13:47	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**2.4**	1.6	0.44	1	03/19/19 13:47	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	3.9	0.30	1	03/19/19 13:47	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**400**	3.9	0.40	1	03/19/19 13:47	3/18/19	
Perfluoropentanoic acid (PFPeA)	**1200**	39	17	10	03/25/19 11:27	3/18/19	
Perfluorohexanoic acid (PFHxA)	**1100**	92	88	10	03/25/19 11:27	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**1100**	39	6.3	10	03/25/19 11:27	3/18/19	
Perfluorooctanoic acid (PFOA)	**170**	1.6	0.35	1	03/19/19 13:47	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	3.9	1.1	1	03/19/19 13:47	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	3.9	1.2	1	03/19/19 13:47	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	3.9	1.5	1	03/19/19 13:47	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	3.9	1.3	1	03/19/19 13:47	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	3.9	1.3	1	03/19/19 13:47	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	3.9	2.0	1	03/19/19 13:47	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	3.9	0.52	1	03/19/19 13:47	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	3.9	1.4	1	03/19/19 13:47	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	3.9	0.50	1	03/19/19 13:47	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**4.6**	3.9	0.55	1	03/19/19 13:47	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**0.65 J**	3.9	0.15	1	03/19/19 13:47	3/18/19	

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Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 12:15
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19A2 030519	**Units:**	ng/L
Lab Code:	K1902064-008	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**7.8**	4.0	0.28	1	03/19/19 13:58	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**18**	4.0	1.3	1	03/19/19 13:58	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**2.1 J**	4.0	0.44	1	03/19/19 13:58	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**150**	1.6	0.44	1	03/19/19 13:58	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.0	0.30	1	03/19/19 13:58	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**51**	4.0	0.40	1	03/19/19 13:58	3/18/19	
Perfluoropentanoic acid (PFPeA)	**120**	4.0	1.7	1	03/19/19 13:58	3/18/19	
Perfluorohexanoic acid (PFHxA)	**93**	9.2	8.8	1	03/19/19 13:58	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**46**	4.0	0.63	1	03/19/19 13:58	3/18/19	
Perfluorooctanoic acid (PFOA)	**15**	1.6	0.35	1	03/19/19 13:58	3/18/19	
Perfluorononanoic acid (PFNA)	**10**	4.0	1.1	1	03/19/19 13:58	3/18/19	
Perfluorodecanoic acid (PFDA)	**4.4**	4.0	1.2	1	03/19/19 13:58	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.0	1.5	1	03/19/19 13:58	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.0	1.3	1	03/19/19 13:58	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.0	1.3	1	03/19/19 13:58	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.0	2.0	1	03/19/19 13:58	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.0	0.52	1	03/19/19 13:58	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.0	1.4	1	03/19/19 13:58	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.0	0.50	1	03/19/19 13:58	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**2.8 J**	4.0	0.55	1	03/19/19 13:58	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**63**	4.0	0.15	1	03/19/19 13:58	3/18/19	

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Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 12:30
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Field Blank 030519	**Units:**	ng/L
Lab Code:	K1902064-009	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.4	0.28	1	03/19/19 14:08	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.4	1.3	1	03/19/19 14:08	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.4	0.44	1	03/19/19 14:08	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.8	0.44	1	03/19/19 14:08	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.4	0.30	1	03/19/19 14:08	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.4	0.40	1	03/19/19 14:08	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.4	1.7	1	03/19/19 14:08	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 14:08	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.4	0.63	1	03/19/19 14:08	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.8	0.35	1	03/19/19 14:08	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.4	1.1	1	03/19/19 14:08	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.4	1.2	1	03/19/19 14:08	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.4	1.5	1	03/19/19 14:08	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.4	1.3	1	03/19/19 14:08	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.4	1.3	1	03/19/19 14:08	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.4	2.0	1	03/19/19 14:08	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.4	0.52	1	03/19/19 14:08	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.4	1.4	1	03/19/19 14:08	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.4	0.50	1	03/19/19 14:08	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.4	0.55	1	03/19/19 14:08	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.4	0.15	1	03/19/19 14:08	3/18/19	

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Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 13:40
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19B 030519	**Units:**	ng/L
Lab Code:	K1902064-010	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**200**	4.2	0.28	1	03/19/19 14:19	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**930**	42	13	10	03/25/19 11:37	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**17**	4.2	0.44	1	03/19/19 14:19	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**87** J	1.7	0.44	1	03/19/19 14:19	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 14:19	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**120**	4.2	0.40	1	03/19/19 14:19	3/18/19	
Perfluoropentanoic acid (PFPeA)	**360**	4.2	1.7	1	03/19/19 14:19	3/18/19	
Perfluorohexanoic acid (PFHxA)	**380**	9.2	8.8	1	03/19/19 14:19	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**290**	4.2	0.63	1	03/19/19 14:19	3/18/19	
Perfluorooctanoic acid (PFOA)	**120**	1.7	0.35	1	03/19/19 14:19	3/18/19	
Perfluorononanoic acid (PFNA)	**28**	4.2	1.1	1	03/19/19 14:19	3/18/19	
Perfluorodecanoic acid (PFDA)	**1.8 J**	4.2	1.2	1	03/19/19 14:19	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	**1.9 J**	4.2	1.5	1	03/19/19 14:19	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 14:19	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 14:19	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 14:19	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 14:19	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 14:19	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 14:19	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**120**	4.2	0.55	1	03/19/19 14:19	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**8.7**	4.2	0.15	1	03/19/19 14:19	3/18/19	

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Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 13:15
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Equipment Blank 030519	**Units:**	ng/L
Lab Code:	K1902064-011	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.1	0.28	1	03/19/19 14:50	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.1	1.3	1	03/19/19 14:50	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.1	0.44	1	03/19/19 14:50	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.6	0.44	1	03/19/19 14:50	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.1	0.30	1	03/19/19 14:50	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.1	0.40	1	03/19/19 14:50	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.1	1.7	1	03/19/19 14:50	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 14:50	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.1	0.63	1	03/19/19 14:50	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.6	0.35	1	03/19/19 14:50	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.1	1.1	1	03/19/19 14:50	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.1	1.2	1	03/19/19 14:50	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.1	1.5	1	03/19/19 14:50	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.1	1.3	1	03/19/19 14:50	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.1	1.3	1	03/19/19 14:50	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.1	2.0	1	03/19/19 14:50	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.1	0.52	1	03/19/19 14:50	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.1	1.4	1	03/19/19 14:50	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.1	0.50	1	03/19/19 14:50	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.1	0.55	1	03/19/19 14:50	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.1	0.15	1	03/19/19 14:50	3/18/19	

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March 29, 2019

Analytical Report for Service Request No: K1902064

Lindsay Mitchell
AECOM
40 British American Blvd
Latham, NY 12210

RE: PFAS - East Hampton Airport / 60566160

Dear Lindsay,

Enclosed are the results of the sample(s) submitted to our laboratory March 08, 2019
For your reference, these analyses have been assigned our service request number **K1902064.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the 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

Chris Leaf
Project Manager

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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.pjlabs.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/bsdw/labservice.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/anlayte 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: AECOM
Project: PFAS - East Hampton Airport
Sample Matrix: Ground Water

Service Request: K1902064
Date Received: 03/08/2019

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Group. This report contains analytical results and quality control parameters for samples designated for Tier IV validation deliverables, which includes summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Twelve ground water samples were received for analysis at ALS laboratory on 03/08/2019. The samples were received in good condition and consistent with the accompanying chain of custody form. Unless otherwise noted, samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Organic LC:

Method PFC/537M: Samples EH-19A 030519 and EH-19B 030519 required dilution due to the presence of elevated levels of target analytes. The reporting limits are adjusted to reflect the dilution.

Method PFC/537M: The control criteria for matrix spike recoveries of several analytes for sample EH-19B 030519 were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Method PFC/537M: The control criteria were exceeded for D3-MeFOSAA in Continuing Calibration Verifications (CCV) KQ1903668-01. The recoveries of the associated native analytes were within control criteria, which indicated the analysis was in control. No further corrective action was appropriate.

Approved by _____ Date 03/29/2019

Chain of Custody

ALS Environmental—Kelso Laboratory
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301 Fulling Mill Road
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 1902064 1 of 2

ALS Quote #:

Client Name: AECOM

Address: 40 British American Blvd Latham, NY 12110

Contact: Lindsay Mitchell

Phone#:

Project Name/#: East Hampton Airport

Bill To: (OOS(olla(

TAT: [✓] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required: Approved?

Email? [✓] -Y Lindsay.Mitchell@aecom.com

Fax? [ ] -Y No.:

Receipt Information (completed by Receiving Lab)

W.O. Temp: ____ Therm ID: ____

Courier/Tracking #:

Purchase Order #:

Project Comments:

ALS Field Services: □ Pickup □ Labor □ Composite Sampling □ Rental Equipment

Other:

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	Container Type	Container Size	Preservative	PFC/1633/1PFOA	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
1 EH-B1 030419	03/04/19	1040	G	GW	P	250	N/A		2	
2 EH-102 030419		1150							2	
3 Field blank 030419		1155							2	
4 Equipment blank 030419		1200							2	
5 EH-1 030419		1355							2	
6 DUP									2	
7 EH-19A 030519		1100							2	
8 EH-19A2 030519		1215							2	
9 Field Blank 030519		1230							2	
10 EH-19B 030519		1340							2	*MS/MSD Taken

SAMPLED BY (Please Print): Alexandra Golden

Sampler Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Alexandra Golden AECOM			2 K Morrow PAS	3/8/19	0940
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [✓] Standard [ ] CLP-like [ ] USACE/DOD

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other

Reportable to PADEP? Yes [ ] No [ ]

PWSID #

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

* G=Grab; C=Composite

**Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Middletown, PA 17057

Rev 11/18

ALS Environmental

CHAIN OF CUSTODY
97310

001

SR# K1902064

COC Set____of____

COC#_____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Project Name	Project Number:
Project Manager	
Company	
Address	
Phone #	email PCT
Sampler Signature SEE	Sampler Printed Name

CLIENT SAMPLE ID	LABID	SAMPLING Date Time	Matrix	NUMBER OF CONTAINERS	14D PFC/537M / PFOA	1	2	3	4	5	Remarks
1. MS		—	GW	2	X						
2. MSD		—	↓	↓	X						
3 Equipment blank 030519		03/05/19 1315	↓	↓	X						
4.											
5.											
6.											
7.											
8.											
9.											
10.											

Report Requirements

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

Invoice Information

P.O.# 605616160

Bill To:_____

Turnaround Requirements

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm	Firm	Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

ALS

PC CV

Cooler Receipt and Preservation Form

Client AECOM Service Request *K19* 02064

Received: 3/8/19 Opened: 3/8/19 By: KM Unloaded: 3/8/19 By: KM

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   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 NA	Tracking Number NA	Filed
2.4	2.4	5.6	5.6	0	325		8139 4282 5097	

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: Rec'd 4 Field Blanks w/out Sample ID, or dates or times. ~~Placed w/ Samples according to COC~~ Also, For Field Blank 03519 - Rec'd 1 Bottle not 2 as on COC 03419

7/25/16 ***Page*** ____ ***of*** ____

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 10:40
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-B1 030419	**Units:**	ng/L
Lab Code:	K1902064-001	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**4.1 J**	4.4	0.28	1	03/19/19 12:45	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**57**	4.4	1.3	1	03/19/19 12:45	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**5.0**	4.4	0.44	1	03/19/19 12:45	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**110**	1.8	0.44	1	03/19/19 12:45	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.4	0.30	1	03/19/19 12:45	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**13**	4.4	0.40	1	03/19/19 12:45	3/18/19	
Perfluoropentanoic acid (PFPeA)	**20**	4.4	1.7	1	03/19/19 12:45	3/18/19	
Perfluorohexanoic acid (PFHxA)	**32**	9.2	8.8	1	03/19/19 12:45	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**9.8**	4.4	0.63	1	03/19/19 12:45	3/18/19	
Perfluorooctanoic acid (PFOA)	**25**	1.8	0.35	1	03/19/19 12:45	3/18/19	
Perfluorononanoic acid (PFNA)	**1.4 J**	4.4	1.1	1	03/19/19 12:45	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.4	1.2	1	03/19/19 12:45	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.4	1.5	1	03/19/19 12:45	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.4	1.3	1	03/19/19 12:45	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.4	1.3	1	03/19/19 12:45	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.4	2.0	1	03/19/19 12:45	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.4	0.52	1	03/19/19 12:45	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.4	1.4	1	03/19/19 12:45	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.4	0.50	1	03/19/19 12:45	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**7.1**	4.4	0.55	1	03/19/19 12:45	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.4	0.15	1	03/19/19 12:45	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 10:40
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-B1 030419	**Units:**	ng/L
Lab Code:	K1902064-001	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	69	20 - 109	03/19/19 12:45	
18O2-PFHxS	89	26 - 122	03/19/19 12:45	
13C4-PFOS	91	25 - 121	03/19/19 12:45	
13C4-PFBA	79	27 - 124	03/19/19 12:45	
13C5-PFPeA	80	27 - 138	03/19/19 12:45	
13C2-PFHxA	79	28 - 132	03/19/19 12:45	
13C4-PFHpA	89	19 - 139	03/19/19 12:45	
13C4-PFOA	81	22 - 130	03/19/19 12:45	
13C5-PFNA	84	20 - 127	03/19/19 12:45	
13C2-PFDA	76	24 - 125	03/19/19 12:45	
13C2-PFUnDA	76	22 - 125	03/19/19 12:45	
13C2-PFDoDA	70	19 - 122	03/19/19 12:45	
13C2-PFTeDA	76	13 - 124	03/19/19 12:45	
13C8-FOSA	75	18 - 109	03/19/19 12:45	
D3-MeFOSAA	47	9 - 123	03/19/19 12:45	
D5-EtFOSAA	50	12 - 126	03/19/19 12:45	
13C2-6:2 FTS	111	10 - 226	03/19/19 12:45	
13C2-8:2 FTS	95	10 - 202	03/19/19 12:45	

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 11:50
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-162 030419	**Units:**	ng/L
Lab Code:	K1902064-002	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**4.1 J**	4.2	0.28	1	03/19/19 12:55	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**32**	4.2	1.3	1	03/19/19 12:55	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**1.8 J**	4.2	0.44	1	03/19/19 12:55	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**130**	1.7	0.44	1	03/19/19 12:55	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 12:55	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**3.9 J**	4.2	0.40	1	03/19/19 12:55	3/18/19	
Perfluoropentanoic acid (PFPeA)	**2.9 J**	4.2	1.7	1	03/19/19 12:55	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 12:55	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**3.3 J**	4.2	0.63	1	03/19/19 12:55	3/18/19	
Perfluorooctanoic acid (PFOA)	**9.5**	1.7	0.35	1	03/19/19 12:55	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.2	1.1	1	03/19/19 12:55	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.2	1.2	1	03/19/19 12:55	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.2	1.5	1	03/19/19 12:55	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 12:55	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 12:55	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 12:55	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 12:55	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 12:55	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 12:55	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**4.5**	4.2	0.55	1	03/19/19 12:55	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.2	0.15	1	03/19/19 12:55	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 11:50
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-162 030419	**Units:**	ng/L
Lab Code:	K1902064-002	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	74	20 - 109	03/19/19 12:55	
18O2-PFHxS	85	26 - 122	03/19/19 12:55	
13C4-PFOS	83	25 - 121	03/19/19 12:55	
13C4-PFBA	75	27 - 124	03/19/19 12:55	
13C5-PFPeA	80	27 - 138	03/19/19 12:55	
13C2-PFHxA	75	28 - 132	03/19/19 12:55	
13C4-PFHpA	81	19 - 139	03/19/19 12:55	
13C4-PFOA	79	22 - 130	03/19/19 12:55	
13C5-PFNA	81	20 - 127	03/19/19 12:55	
13C2-PFDA	72	24 - 125	03/19/19 12:55	
13C2-PFUnDA	69	22 - 125	03/19/19 12:55	
13C2-PFDoDA	67	19 - 122	03/19/19 12:55	
13C2-PFTeDA	71	13 - 124	03/19/19 12:55	
13C8-FOSA	73	18 - 109	03/19/19 12:55	
D3-MeFOSAA	47	9 - 123	03/19/19 12:55	
D5-EtFOSAA	57	12 - 126	03/19/19 12:55	
13C2-6:2 FTS	123	10 - 226	03/19/19 12:55	
13C2-8:2 FTS	93	10 - 202	03/19/19 12:55	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 11:55
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Field Blank 030419	**Units:**	ng/L
Lab Code:	K1902064-003	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.2	0.28	1	03/19/19 13:05	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.2	1.3	1	03/19/19 13:05	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.2	0.44	1	03/19/19 13:05	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.7	0.44	1	03/19/19 13:05	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 13:05	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.2	0.40	1	03/19/19 13:05	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.2	1.7	1	03/19/19 13:05	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 13:05	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.2	0.63	1	03/19/19 13:05	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.7	0.35	1	03/19/19 13:05	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.2	1.1	1	03/19/19 13:05	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.2	1.2	1	03/19/19 13:05	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.2	1.5	1	03/19/19 13:05	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 13:05	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 13:05	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 13:05	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 13:05	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 13:05	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 13:05	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.2	0.55	1	03/19/19 13:05	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.2	0.15	1	03/19/19 13:05	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 11:55
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Field Blank 030419	**Units:**	ng/L
Lab Code:	K1902064-003	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	66	20 - 109	03/19/19 13:05	
18O2-PFHxS	82	26 - 122	03/19/19 13:05	
13C4-PFOS	79	25 - 121	03/19/19 13:05	
13C4-PFBA	68	27 - 124	03/19/19 13:05	
13C5-PFPeA	77	27 - 138	03/19/19 13:05	
13C2-PFHxA	72	28 - 132	03/19/19 13:05	
13C4-PFHpA	85	19 - 139	03/19/19 13:05	
13C4-PFOA	75	22 - 130	03/19/19 13:05	
13C5-PFNA	75	20 - 127	03/19/19 13:05	
13C2-PFDA	70	24 - 125	03/19/19 13:05	
13C2-PFUnDA	64	22 - 125	03/19/19 13:05	
13C2-PFDoDA	60	19 - 122	03/19/19 13:05	
13C2-PFTeDA	68	13 - 124	03/19/19 13:05	
13C8-FOSA	65	18 - 109	03/19/19 13:05	
D3-MeFOSAA	45	9 - 123	03/19/19 13:05	
D5-EtFOSAA	52	12 - 126	03/19/19 13:05	
13C2-6:2 FTS	105	10 - 226	03/19/19 13:05	
13C2-8:2 FTS	87	10 - 202	03/19/19 13:05	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 12:00
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Equipment Blank 030419	**Units:**	ng/L
Lab Code:	K1902064-004	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.4	0.28	1	03/19/19 13:16	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.4	1.3	1	03/19/19 13:16	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.4	0.44	1	03/19/19 13:16	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.8	0.44	1	03/19/19 13:16	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.4	0.30	1	03/19/19 13:16	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.4	0.40	1	03/19/19 13:16	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.4	1.7	1	03/19/19 13:16	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 13:16	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.4	0.63	1	03/19/19 13:16	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.8	0.35	1	03/19/19 13:16	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.4	1.1	1	03/19/19 13:16	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.4	1.2	1	03/19/19 13:16	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.4	1.5	1	03/19/19 13:16	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.4	1.3	1	03/19/19 13:16	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.4	1.3	1	03/19/19 13:16	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.4	2.0	1	03/19/19 13:16	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.4	0.52	1	03/19/19 13:16	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.4	1.4	1	03/19/19 13:16	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.4	0.50	1	03/19/19 13:16	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.4	0.55	1	03/19/19 13:16	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.4	0.15	1	03/19/19 13:16	3/18/19	

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Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 12:00
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Equipment Blank 030419	**Units:**	ng/L
Lab Code:	K1902064-004	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	80	20 - 109	03/19/19 13:16	
18O2-PFHxS	85	26 - 122	03/19/19 13:16	
13C4-PFOS	80	25 - 121	03/19/19 13:16	
13C4-PFBA	72	27 - 124	03/19/19 13:16	
13C5-PFPeA	80	27 - 138	03/19/19 13:16	
13C2-PFHxA	72	28 - 132	03/19/19 13:16	
13C4-PFHpA	84	19 - 139	03/19/19 13:16	
13C4-PFOA	79	22 - 130	03/19/19 13:16	
13C5-PFNA	77	20 - 127	03/19/19 13:16	
13C2-PFDA	73	24 - 125	03/19/19 13:16	
13C2-PFUnDA	76	22 - 125	03/19/19 13:16	
13C2-PFDoDA	66	19 - 122	03/19/19 13:16	
13C2-PFTeDA	72	13 - 124	03/19/19 13:16	
13C8-FOSA	67	18 - 109	03/19/19 13:16	
D3-MeFOSAA	47	9 - 123	03/19/19 13:16	
D5-EtFOSAA	52	12 - 126	03/19/19 13:16	
13C2-6:2 FTS	119	10 - 226	03/19/19 13:16	
13C2-8:2 FTS	90	10 - 202	03/19/19 13:16	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 13:55
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-1 030419	**Units:**	ng/L
Lab Code:	K1902064-005	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**8.8**	4.2	0.28	1	03/19/19 13:26	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**25**	4.2	1.3	1	03/19/19 13:26	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**0.72 J**	4.2	0.44	1	03/19/19 13:26	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**0.99 J**	1.7	0.44	1	03/19/19 13:26	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 13:26	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**43**	4.2	0.40	1	03/19/19 13:26	3/18/19	
Perfluoropentanoic acid (PFPeA)	**110**	4.2	1.7	1	03/19/19 13:26	3/18/19	
Perfluorohexanoic acid (PFHxA)	**110**	9.2	8.8	1	03/19/19 13:26	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**30**	4.2	0.63	1	03/19/19 13:26	3/18/19	
Perfluorooctanoic acid (PFOA)	**6.0**	1.7	0.35	1	03/19/19 13:26	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.2	1.1	1	03/19/19 13:26	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.2	1.2	1	03/19/19 13:26	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.2	1.5	1	03/19/19 13:26	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 13:26	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 13:26	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 13:26	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 13:26	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 13:26	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 13:26	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**3.0 J**	4.2	0.55	1	03/19/19 13:26	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.2	0.15	1	03/19/19 13:26	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19 13:55
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-1 030419	**Units:**	ng/L
Lab Code:	K1902064-005	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	74	20 - 109	03/19/19 13:26	
18O2-PFHxS	76	26 - 122	03/19/19 13:26	
13C4-PFOS	79	25 - 121	03/19/19 13:26	
13C4-PFBA	73	27 - 124	03/19/19 13:26	
13C5-PFPeA	78	27 - 138	03/19/19 13:26	
13C2-PFHxA	74	28 - 132	03/19/19 13:26	
13C4-PFHpA	80	19 - 139	03/19/19 13:26	
13C4-PFOA	75	22 - 130	03/19/19 13:26	
13C5-PFNA	74	20 - 127	03/19/19 13:26	
13C2-PFDA	68	24 - 125	03/19/19 13:26	
13C2-PFUnDA	64	22 - 125	03/19/19 13:26	
13C2-PFDoDA	60	19 - 122	03/19/19 13:26	
13C2-PFTeDA	64	13 - 124	03/19/19 13:26	
13C8-FOSA	71	18 - 109	03/19/19 13:26	
D3-MeFOSAA	45	9 - 123	03/19/19 13:26	
D5-EtFOSAA	54	12 - 126	03/19/19 13:26	
13C2-6:2 FTS	129	10 - 226	03/19/19 13:26	
13C2-8:2 FTS	96	10 - 202	03/19/19 13:26	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	DUP	**Units:**	ng/L
Lab Code:	K1902064-006	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**3.8 J**	4.1	0.28	1	03/19/19 13:37	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**35**	4.1	1.3	1	03/19/19 13:37	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**1.9 J**	4.1	0.44	1	03/19/19 13:37	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**120**	1.6	0.44	1	03/19/19 13:37	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.1	0.30	1	03/19/19 13:37	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**4.2**	4.1	0.40	1	03/19/19 13:37	3/18/19	
Perfluoropentanoic acid (PFPeA)	**3.1 J**	4.1	1.7	1	03/19/19 13:37	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 13:37	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**3.7 J**	4.1	0.63	1	03/19/19 13:37	3/18/19	
Perfluorooctanoic acid (PFOA)	**9.1**	1.6	0.35	1	03/19/19 13:37	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.1	1.1	1	03/19/19 13:37	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.1	1.2	1	03/19/19 13:37	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.1	1.5	1	03/19/19 13:37	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.1	1.3	1	03/19/19 13:37	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.1	1.3	1	03/19/19 13:37	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.1	2.0	1	03/19/19 13:37	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.1	0.52	1	03/19/19 13:37	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.1	1.4	1	03/19/19 13:37	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.1	0.50	1	03/19/19 13:37	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**3.7 J**	4.1	0.55	1	03/19/19 13:37	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.1	0.15	1	03/19/19 13:37	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/04/19
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	DUP	**Units:**	ng/L
Lab Code:	K1902064-006	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	66	20 - 109	03/19/19 13:37	
18O2-PFHxS	70	26 - 122	03/19/19 13:37	
13C4-PFOS	78	25 - 121	03/19/19 13:37	
13C4-PFBA	69	27 - 124	03/19/19 13:37	
13C5-PFPeA	74	27 - 138	03/19/19 13:37	
13C2-PFHxA	71	28 - 132	03/19/19 13:37	
13C4-PFHpA	80	19 - 139	03/19/19 13:37	
13C4-PFOA	70	22 - 130	03/19/19 13:37	
13C5-PFNA	70	20 - 127	03/19/19 13:37	
13C2-PFDA	66	24 - 125	03/19/19 13:37	
13C2-PFUnDA	66	22 - 125	03/19/19 13:37	
13C2-PFDoDA	58	19 - 122	03/19/19 13:37	
13C2-PFTeDA	64	13 - 124	03/19/19 13:37	
13C8-FOSA	65	18 - 109	03/19/19 13:37	
D3-MeFOSAA	44	9 - 123	03/19/19 13:37	
D5-EtFOSAA	48	12 - 126	03/19/19 13:37	
13C2-6:2 FTS	100	10 - 226	03/19/19 13:37	
13C2-8:2 FTS	83	10 - 202	03/19/19 13:37	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 11:00
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19A 030519	**Units:**	ng/L
Lab Code:	K1902064-007	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**40**		3.9	0.28	1	03/19/19 13:47	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**150**		3.9	1.3	1	03/19/19 13:47	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44	U	3.9	0.44	1	03/19/19 13:47	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**2.4**		1.6	0.44	1	03/19/19 13:47	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30	U	3.9	0.30	1	03/19/19 13:47	3/18/19	
Perfluoroalkane Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	**400**		3.9	0.40	1	03/19/19 13:47	3/18/19	
Perfluoropentanoic acid (PFPeA)	**1200**		39	17	10	03/25/19 11:27	3/18/19	
Perfluorohexanoic acid (PFHxA)	**1100**		92	88	10	03/25/19 11:27	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**1100**		39	6.3	10	03/25/19 11:27	3/18/19	
Perfluorooctanoic acid (PFOA)	**170**		1.6	0.35	1	03/19/19 13:47	3/18/19	
Perfluorononanoic acid (PFNA)	1.1	U	3.9	1.1	1	03/19/19 13:47	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2	U	3.9	1.2	1	03/19/19 13:47	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5	U	3.9	1.5	1	03/19/19 13:47	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3	U	3.9	1.3	1	03/19/19 13:47	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3	U	3.9	1.3	1	03/19/19 13:47	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0	U	3.9	2.0	1	03/19/19 13:47	3/18/19	
Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	0.52	U	3.9	0.52	1	03/19/19 13:47	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4	U	3.9	1.4	1	03/19/19 13:47	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50	U	3.9	0.50	1	03/19/19 13:47	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**4.6**		3.9	0.55	1	03/19/19 13:47	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**0.65**	**J**	3.9	0.15	1	03/19/19 13:47	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 11:00
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19A 030519	**Units:**	ng/L
Lab Code:	K1902064-007	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	52	20 - 109	03/19/19 13:47	
18O2-PFHxS	63	26 - 122	03/19/19 13:47	
13C4-PFOS	80	25 - 121	03/19/19 13:47	
13C4-PFBA	67	27 - 124	03/19/19 13:47	
13C5-PFPeA	85	27 - 138	03/25/19 11:27	
13C2-PFHxA	76	28 - 132	03/25/19 11:27	
13C4-PFHpA	91	19 - 139	03/25/19 11:27	
13C4-PFOA	69	22 - 130	03/19/19 13:47	
13C5-PFNA	71	20 - 127	03/19/19 13:47	
13C2-PFDA	60	24 - 125	03/19/19 13:47	
13C2-PFUnDA	60	22 - 125	03/19/19 13:47	
13C2-PFDoDA	51	19 - 122	03/19/19 13:47	
13C2-PFTeDA	56	13 - 124	03/19/19 13:47	
13C8-FOSA	63	18 - 109	03/19/19 13:47	
D3-MeFOSAA	41	9 - 123	03/19/19 13:47	
D5-EtFOSAA	44	12 - 126	03/19/19 13:47	
13C2-6:2 FTS	135	10 - 226	03/19/19 13:47	
13C2-8:2 FTS	90	10 - 202	03/19/19 13:47	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 12:15
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19A2 030519	**Units:**	ng/L
Lab Code:	K1902064-008	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**7.8**	4.0	0.28	1	03/19/19 13:58	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**18**	4.0	1.3	1	03/19/19 13:58	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**2.1 J**	4.0	0.44	1	03/19/19 13:58	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**150**	1.6	0.44	1	03/19/19 13:58	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.0	0.30	1	03/19/19 13:58	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**51**	4.0	0.40	1	03/19/19 13:58	3/18/19	
Perfluoropentanoic acid (PFPeA)	**120**	4.0	1.7	1	03/19/19 13:58	3/18/19	
Perfluorohexanoic acid (PFHxA)	**93**	9.2	8.8	1	03/19/19 13:58	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**46**	4.0	0.63	1	03/19/19 13:58	3/18/19	
Perfluorooctanoic acid (PFOA)	**15**	1.6	0.35	1	03/19/19 13:58	3/18/19	
Perfluorononanoic acid (PFNA)	**10**	4.0	1.1	1	03/19/19 13:58	3/18/19	
Perfluorodecanoic acid (PFDA)	**4.4**	4.0	1.2	1	03/19/19 13:58	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.0	1.5	1	03/19/19 13:58	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.0	1.3	1	03/19/19 13:58	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.0	1.3	1	03/19/19 13:58	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.0	2.0	1	03/19/19 13:58	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.0	0.52	1	03/19/19 13:58	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.0	1.4	1	03/19/19 13:58	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.0	0.50	1	03/19/19 13:58	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**2.8 J**	4.0	0.55	1	03/19/19 13:58	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**63**	4.0	0.15	1	03/19/19 13:58	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 12:15
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19A2 030519	**Units:**	ng/L
Lab Code:	K1902064-008	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	48	20 - 109	03/19/19 13:58	
18O2-PFHxS	58	26 - 122	03/19/19 13:58	
13C4-PFOS	76	25 - 121	03/19/19 13:58	
13C4-PFBA	67	27 - 124	03/19/19 13:58	
13C5-PFPeA	72	27 - 138	03/19/19 13:58	
13C2-PFHxA	65	28 - 132	03/19/19 13:58	
13C4-PFHpA	56	19 - 139	03/19/19 13:58	
13C4-PFOA	71	22 - 130	03/19/19 13:58	
13C5-PFNA	65	20 - 127	03/19/19 13:58	
13C2-PFDA	63	24 - 125	03/19/19 13:58	
13C2-PFUnDA	60	22 - 125	03/19/19 13:58	
13C2-PFDoDA	50	19 - 122	03/19/19 13:58	
13C2-PFTeDA	53	13 - 124	03/19/19 13:58	
13C8-FOSA	64	18 - 109	03/19/19 13:58	
D3-MeFOSAA	39	9 - 123	03/19/19 13:58	
D5-EtFOSAA	41	12 - 126	03/19/19 13:58	
13C2-6:2 FTS	152	10 - 226	03/19/19 13:58	
13C2-8:2 FTS	88	10 - 202	03/19/19 13:58	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 12:30
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Field Blank 030519	**Units:**	ng/L
Lab Code:	K1902064-009	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.4	0.28	1	03/19/19 14:08	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.4	1.3	1	03/19/19 14:08	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.4	0.44	1	03/19/19 14:08	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.8	0.44	1	03/19/19 14:08	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.4	0.30	1	03/19/19 14:08	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.4	0.40	1	03/19/19 14:08	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.4	1.7	1	03/19/19 14:08	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 14:08	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.4	0.63	1	03/19/19 14:08	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.8	0.35	1	03/19/19 14:08	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.4	1.1	1	03/19/19 14:08	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.4	1.2	1	03/19/19 14:08	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.4	1.5	1	03/19/19 14:08	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.4	1.3	1	03/19/19 14:08	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.4	1.3	1	03/19/19 14:08	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.4	2.0	1	03/19/19 14:08	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.4	0.52	1	03/19/19 14:08	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.4	1.4	1	03/19/19 14:08	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.4	0.50	1	03/19/19 14:08	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.4	0.55	1	03/19/19 14:08	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.4	0.15	1	03/19/19 14:08	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 12:30
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Field Blank 030519	**Units:**	ng/L
Lab Code:	K1902064-009	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	67	20 - 109	03/19/19 14:08	
18O2-PFHxS	74	26 - 122	03/19/19 14:08	
13C4-PFOS	81	25 - 121	03/19/19 14:08	
13C4-PFBA	69	27 - 124	03/19/19 14:08	
13C5-PFPeA	76	27 - 138	03/19/19 14:08	
13C2-PFHxA	75	28 - 132	03/19/19 14:08	
13C4-PFHpA	74	19 - 139	03/19/19 14:08	
13C4-PFOA	74	22 - 130	03/19/19 14:08	
13C5-PFNA	78	20 - 127	03/19/19 14:08	
13C2-PFDA	75	24 - 125	03/19/19 14:08	
13C2-PFUnDA	72	22 - 125	03/19/19 14:08	
13C2-PFDoDA	67	19 - 122	03/19/19 14:08	
13C2-PFTeDA	74	13 - 124	03/19/19 14:08	
13C8-FOSA	69	18 - 109	03/19/19 14:08	
D3-MeFOSAA	48	9 - 123	03/19/19 14:08	
D5-EtFOSAA	55	12 - 126	03/19/19 14:08	
13C2-6:2 FTS	102	10 - 226	03/19/19 14:08	
13C2-8:2 FTS	86	10 - 202	03/19/19 14:08	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 13:40
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19B 030519	**Units:**	ng/L
Lab Code:	K1902064-010	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	**200**	4.2	0.28	1	03/19/19 14:19	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	**930**	42	13	10	03/25/19 11:37	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	**17**	4.2	0.44	1	03/19/19 14:19	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	**87**	1.7	0.44	1	03/19/19 14:19	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.2	0.30	1	03/19/19 14:19	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	**120**	4.2	0.40	1	03/19/19 14:19	3/18/19	
Perfluoropentanoic acid (PFPeA)	**360**	4.2	1.7	1	03/19/19 14:19	3/18/19	
Perfluorohexanoic acid (PFHxA)	**380**	9.2	8.8	1	03/19/19 14:19	3/18/19	
Perfluoroheptanoic acid (PFHpA)	**290**	4.2	0.63	1	03/19/19 14:19	3/18/19	
Perfluorooctanoic acid (PFOA)	**120**	1.7	0.35	1	03/19/19 14:19	3/18/19	
Perfluorononanoic acid (PFNA)	**28**	4.2	1.1	1	03/19/19 14:19	3/18/19	
Perfluorodecanoic acid (PFDA)	**1.8 J**	4.2	1.2	1	03/19/19 14:19	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	**1.9 J**	4.2	1.5	1	03/19/19 14:19	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.2	1.3	1	03/19/19 14:19	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.2	1.3	1	03/19/19 14:19	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.2	2.0	1	03/19/19 14:19	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.2	0.52	1	03/19/19 14:19	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.2	1.4	1	03/19/19 14:19	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.2	0.50	1	03/19/19 14:19	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	**120**	4.2	0.55	1	03/19/19 14:19	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	**8.7**	4.2	0.15	1	03/19/19 14:19	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 13:40
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	EH-19B 030519	**Units:**	ng/L
Lab Code:	K1902064-010	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	50	20 - 109	03/19/19 14:19	
18O2-PFHxS	96	26 - 122	03/25/19 11:37	
13C4-PFOS	78	25 - 121	03/19/19 14:19	
13C4-PFBA	71	27 - 124	03/19/19 14:19	
13C5-PFPeA	72	27 - 138	03/19/19 14:19	
13C2-PFHxA	64	28 - 132	03/19/19 14:19	
13C4-PFHpA	59	19 - 139	03/19/19 14:19	
13C4-PFOA	68	22 - 130	03/19/19 14:19	
13C5-PFNA	69	20 - 127	03/19/19 14:19	
13C2-PFDA	60	24 - 125	03/19/19 14:19	
13C2-PFUnDA	58	22 - 125	03/19/19 14:19	
13C2-PFDoDA	57	19 - 122	03/19/19 14:19	
13C2-PFTeDA	59	13 - 124	03/19/19 14:19	
13C8-FOSA	67	18 - 109	03/19/19 14:19	
D3-MeFOSAA	40	9 - 123	03/19/19 14:19	
D5-EtFOSAA	44	12 - 126	03/19/19 14:19	
13C2-6:2 FTS	89	10 - 226	03/19/19 14:19	
13C2-8:2 FTS	76	10 - 202	03/19/19 14:19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 13:15
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Equipment Blank 030519	**Units:**	ng/L
Lab Code:	K1902064-011	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	4.1	0.28	1	03/19/19 14:50	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	4.1	1.3	1	03/19/19 14:50	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	4.1	0.44	1	03/19/19 14:50	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	1.6	0.44	1	03/19/19 14:50	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	4.1	0.30	1	03/19/19 14:50	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	4.1	0.40	1	03/19/19 14:50	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	4.1	1.7	1	03/19/19 14:50	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	9.2	8.8	1	03/19/19 14:50	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	4.1	0.63	1	03/19/19 14:50	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	1.6	0.35	1	03/19/19 14:50	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	4.1	1.1	1	03/19/19 14:50	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	4.1	1.2	1	03/19/19 14:50	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	4.1	1.5	1	03/19/19 14:50	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	4.1	1.3	1	03/19/19 14:50	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	4.1	1.3	1	03/19/19 14:50	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	4.1	2.0	1	03/19/19 14:50	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	4.1	0.52	1	03/19/19 14:50	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	4.1	1.4	1	03/19/19 14:50	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	4.1	0.50	1	03/19/19 14:50	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	4.1	0.55	1	03/19/19 14:50	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	4.1	0.15	1	03/19/19 14:50	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19 13:15
Sample Matrix:	Ground Water	**Date Received:**	03/08/19 09:40
Sample Name:	Equipment Blank 030519	**Units:**	ng/L
Lab Code:	K1902064-011	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	63	20 - 109	03/19/19 14:50	
18O2-PFHxS	83	26 - 122	03/19/19 14:50	
13C4-PFOS	79	25 - 121	03/19/19 14:50	
13C4-PFBA	66	27 - 124	03/19/19 14:50	
13C5-PFPeA	70	27 - 138	03/19/19 14:50	
13C2-PFHxA	67	28 - 132	03/19/19 14:50	
13C4-PFHpA	73	19 - 139	03/19/19 14:50	
13C4-PFOA	71	22 - 130	03/19/19 14:50	
13C5-PFNA	71	20 - 127	03/19/19 14:50	
13C2-PFDA	68	24 - 125	03/19/19 14:50	
13C2-PFUnDA	71	22 - 125	03/19/19 14:50	
13C2-PFDoDA	62	19 - 122	03/19/19 14:50	
13C2-PFTeDA	65	13 - 124	03/19/19 14:50	
13C8-FOSA	59	18 - 109	03/19/19 14:50	
D3-MeFOSAA	43	9 - 123	03/19/19 14:50	
D5-EtFOSAA	46	12 - 126	03/19/19 14:50	
13C2-6:2 FTS	88	10 - 226	03/19/19 14:50	
13C2-8:2 FTS	78	10 - 202	03/19/19 14:50	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1903443-04	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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)	0.28 U	5.0	0.28	1	03/19/19 12:24	3/18/19	
Perfluorohexane sulfonic acid (PFHxS)	1.3 U	5.0	1.3	1	03/19/19 12:24	3/18/19	
Perfluoroheptane sulfonic acid (PFHpS)	0.44 U	5.0	0.44	1	03/19/19 12:24	3/18/19	
Perfluorooctane sulfonic acid (PFOS)	0.44 U	2.0	0.44	1	03/19/19 12:24	3/18/19	
Perfluorodecane sulfonic acid (PFDS)	0.30 U	5.0	0.30	1	03/19/19 12:24	3/18/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	0.40 U	5.0	0.40	1	03/19/19 12:24	3/18/19	
Perfluoropentanoic acid (PFPeA)	1.7 U	5.0	1.7	1	03/19/19 12:24	3/18/19	
Perfluorohexanoic acid (PFHxA)	8.8 U	10	8.8	1	03/19/19 12:24	3/18/19	
Perfluoroheptanoic acid (PFHpA)	0.63 U	5.0	0.63	1	03/19/19 12:24	3/18/19	
Perfluorooctanoic acid (PFOA)	0.35 U	2.0	0.35	1	03/19/19 12:24	3/18/19	
Perfluorononanoic acid (PFNA)	1.1 U	5.0	1.1	1	03/19/19 12:24	3/18/19	
Perfluorodecanoic acid (PFDA)	1.2 U	5.0	1.2	1	03/19/19 12:24	3/18/19	
Perfluoroundecanoic acid (PFUnDA)	1.5 U	5.0	1.5	1	03/19/19 12:24	3/18/19	
Perfluorododecanoic acid (PFDoDA)	1.3 U	5.0	1.3	1	03/19/19 12:24	3/18/19	
Perfluorotridecanoic acid (PFTrDA)	1.3 U	5.0	1.3	1	03/19/19 12:24	3/18/19	
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	5.0	2.0	1	03/19/19 12:24	3/18/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	0.52 U	5.0	0.52	1	03/19/19 12:24	3/18/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	5.0	1.4	1	03/19/19 12:24	3/18/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	5.0	0.50	1	03/19/19 12:24	3/18/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.55 U	5.0	0.55	1	03/19/19 12:24	3/18/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.15 U	5.0	0.15	1	03/19/19 12:24	3/18/19	

Analytical Report

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	NA
Sample Matrix:	Ground Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KQ1903443-04	**Basis:**	NA

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	61	20 - 109	03/19/19 12:24	
18O2-PFHxS	79	26 - 122	03/19/19 12:24	
13C4-PFOS	73	25 - 121	03/19/19 12:24	
13C4-PFBA	67	27 - 124	03/19/19 12:24	
13C5-PFPeA	75	27 - 138	03/19/19 12:24	
13C2-PFHxA	73	28 - 132	03/19/19 12:24	
13C4-PFHpA	79	19 - 139	03/19/19 12:24	
13C4-PFOA	72	22 - 130	03/19/19 12:24	
13C5-PFNA	77	20 - 127	03/19/19 12:24	
13C2-PFDA	72	24 - 125	03/19/19 12:24	
13C2-PFUnDA	68	22 - 125	03/19/19 12:24	
13C2-PFDoDA	63	19 - 122	03/19/19 12:24	
13C2-PFTeDA	69	13 - 124	03/19/19 12:24	
13C8-FOSA	66	18 - 109	03/19/19 12:24	
D3-MeFOSAA	49	9 - 123	03/19/19 12:24	
D5-EtFOSAA	52	12 - 126	03/19/19 12:24	
13C2-6:2 FTS	104	10 - 226	03/19/19 12:24	
13C2-8:2 FTS	90	10 - 202	03/19/19 12:24	

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	EH-B1 030419 K1902064-001	EH-162 030419 K1902064-002	Field Blank 030419 K1902064-003
13C3-PFBS	20-109	69	74	66
18O2-PFHxS	26-122	89	85	82
13C4-PFOS	25-121	91	83	79
13C4-PFBA	27-124	79	75	68
13C5-PFPeA	27-138	80	80	77
13C2-PFHxA	28-132	79	75	72
13C4-PFHpA	19-139	89	81	85
13C4-PFOA	22-130	81	79	75
13C5-PFNA	20-127	84	81	75
13C2-PFDA	24-125	76	72	70
13C2-PFUnDA	22-125	76	69	64
13C2-PFDoDA	19-122	70	67	60
13C2-PFTeDA	13-124	76	71	68
13C8-FOSA	18-109	75	73	65
D3-MeFOSAA	9-123	47	47	45
D5-EtFOSAA	12-126	50	57	52
13C2-6:2 FTS	10-226	111	123	105
13C2-8:2 FTS	10-202	95	93	87

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

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	Equipment Blank 030419 K1902064-004	EH-1 030419 K1902064-005	DUP K1902064-006
13C3-PFBS	20-109	80	74	66
18O2-PFHxS	26-122	85	76	70
13C4-PFOS	25-121	80	79	78
13C4-PFBA	27-124	72	73	69
13C5-PFPeA	27-138	80	78	74
13C2-PFHxA	28-132	72	74	71
13C4-PFHpA	19-139	84	80	80
13C4-PFOA	22-130	79	75	70
13C5-PFNA	20-127	77	74	70
13C2-PFDA	24-125	73	68	66
13C2-PFUnDA	22-125	76	64	66
13C2-PFDoDA	19-122	66	60	58
13C2-PFTeDA	13-124	72	64	64
13C8-FOSA	18-109	67	71	65
D3-MeFOSAA	9-123	47	45	44
D5-EtFOSAA	12-126	52	54	48
13C2-6:2 FTS	10-226	119	129	100
13C2-8:2 FTS	10-202	90	96	83

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

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	EH-19A 030519 K1902064-007	EH-19A2 030519 K1902064-008	Field Blank 030519 K1902064-009
13C3-PFBS	20-109	52	48	67
18O2-PFHxS	26-122	63	58	74
13C4-PFOS	25-121	80	76	81
13C4-PFBA	27-124	67	67	69
13C5-PFPeA	27-138	85	72	76
13C2-PFHxA	28-132	76	65	75
13C4-PFHpA	19-139	91	56	74
13C4-PFOA	22-130	69	71	74
13C5-PFNA	20-127	71	65	78
13C2-PFDA	24-125	60	63	75
13C2-PFUnDA	22-125	60	60	72
13C2-PFDoDA	19-122	51	50	67
13C2-PFTeDA	13-124	56	53	74
13C8-FOSA	18-109	63	64	69
D3-MeFOSAA	9-123	41	39	48
D5-EtFOSAA	12-126	44	41	55
13C2-6:2 FTS	10-226	135	152	102
13C2-8:2 FTS	10-202	90	88	86

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

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	EH-19B 030519 K1902064-010	Equipment Blank 030519 K1902064-011	Method Blank KQ1903443-04
13C3-PFBS	20-109	50	63	61
18O2-PFHxS	26-122	96	83	79
13C4-PFOS	25-121	78	79	73
13C4-PFBA	27-124	71	66	67
13C5-PFPeA	27-138	72	70	75
13C2-PFHxA	28-132	64	67	73
13C4-PFHpA	19-139	59	73	79
13C4-PFOA	22-130	68	71	72
13C5-PFNA	20-127	69	71	77
13C2-PFDA	24-125	60	68	72
13C2-PFUnDA	22-125	58	71	68
13C2-PFDoDA	19-122	57	62	63
13C2-PFTeDA	13-124	59	65	69
13C8-FOSA	18-109	67	59	66
D3-MeFOSAA	9-123	40	43	49
D5-EtFOSAA	12-126	44	46	52
13C2-6:2 FTS	10-226	89	88	104
13C2-8:2 FTS	10-202	76	78	90

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

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160
Sample Matrix: Ground Water

SURROGATE RECOVERY SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

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

Surrogate	Control Limits	Lab Control Sample KQ1903443-03	EH-19B 030519 KQ1903443-01	EH-19B 030519 KQ1903443-02
13C3-PFBS	20-109	59	51	49
18O2-PFHxS	26-122	73	54	49
13C4-PFOS	25-121	78	82	77
13C4-PFBA	27-124	70	74	68
13C5-PFPeA	27-138	73	71	68
13C2-PFHxA	28-132	77	66	62
13C4-PFHpA	19-139	84	54	49
13C4-PFOA	22-130	76	73	64
13C5-PFNA	20-127	80	71	65
13C2-PFDA	24-125	73	70	64
13C2-PFUnDA	22-125	67	65	60
13C2-PFDoDA	19-122	65	57	55
13C2-PFTeDA	13-124	70	61	62
13C8-FOSA	18-109	66	63	67
D3-MeFOSAA	9-123	46	41	43
D5-EtFOSAA	12-126	50	45	47
13C2-6:2 FTS	10-226	99	92	80
13C2-8:2 FTS	10-202	82	73	77

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

Client: AECOM **Service Request:**K1902064
Project: PFAS - East Hampton Airport/60566160 **Date Analyzed:**03/19/19 12:03

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190319_b1\190319_013 **Lab Code:**KQ1903668-01
Instrument ID: K-LCMS-06 **Analysis Lot:**629021
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	6,145,462	5.114
	Upper Limit ==>	12,290,924	6.11
	Lower Limit ==>	3,072,731	4.11
Associated Analyses			
Continuing Calibration Blank	KQ1903668-02	6070444	5.121
Method Blank	KQ1903443-04	7896984	5.098
Lab Control Sample	KQ1903443-03	7382503	5.106
EH-B1 030419	K1902064-001	7011971	5.107
EH-162 030419	K1902064-002	7373420	5.110
Field Blank 030419	K1902064-003	7575659	5.110
Equipment Blank 030419	K1902064-004	7480871	5.108
EH-1 030419	K1902064-005	7370766	5.110
DUP	K1902064-006	8072864	5.108
EH-19A 030519	K1902064-007	7169881	5.110
EH-19A2 030519	K1902064-008	7393806	5.118
Field Blank 030519	K1902064-009	7427323	5.110
EH-19B 030519	K1902064-010	7003724	5.113
EH-19B 030519MS	KQ1903443-01	7285240	5.118
EH-19B 030519DMS	KQ1903443-02	7533842	5.119
Equipment Blank 030519	K1902064-011	7829657	5.108

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: AECOM **Service Request:**K1902064
Project: PFAS - East Hampton Airport/60566160 **Date Analyzed:**03/25/19 11:06

Internal Standard Area and RT SUMMARY

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

File ID: J:\LCMS06\Data\190325_b6\190325_012 **Lab Code:**KQ1904043-01
Instrument ID: K-LCMS-06 **Analysis Lot:**629106
Analysis Method: PFC/537M **Signal ID:**1

		13C7-PFUnDA	
		Area	**RT**
	Result ==>	5,964,715	5.084
	Upper Limit ==>	11,929,430	6.08
	Lower Limit ==>	2,982,358	4.08
Associated Analyses			
Continuing Calibration Blank	KQ1904043-02	6477546	5.096
EH-19A 030519	K1902064-007	5931861	5.086
EH-19B 030519	K1902064-010	6018953	5.088

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Collected:**	03/05/19
Sample Matrix:	Ground Water	**Date Received:**	03/08/19
		Date Analyzed:	03/19/19
		Date Extracted:	03/18/19

Duplicate Matrix Spike Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	EH-19B 030519	**Units:**	ng/L
Lab Code:	K1902064-010	**Basis:**	NA
Analysis Method:	PFC/537M		
Prep Method:	EPA 3535A		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1903443-01			KQ1903443-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Perfluorobutane sulfonic acid (PFBS)	200	232	24.1	123 #	290	24.1	362 #	61-140	22	30
Perfluorohexane sulfonic acid (PFHxS)	930	1140 E	24.8	856 #	1430 E	24.8	2026 #	69-144	22	30
Perfluoroheptane sulfonic acid (PFHpS)	17	53.9	25.9	142	62.6	25.9	175	62-178	15	30
Perfluorooctane sulfonic acid (PFOS)	87	110	25.2	95	131	25.2	176 *	71-139	17	30
Perfluorodecane sulfonic acid (PFDS)	0.30 U	20.8	26.2	79	20.2	26.2	77	69-146	3	30
Perfluorobutanoic acid (PFBA)	120	154	27.1	123 #	193	27.1	267 #	51-157	22	30
Perfluoropentanoic acid (PFPeA)	360	422	27.1	228 #	524 E	27.1	602 #	67-127	21	30
Perfluorohexanoic acid (PFHxA)	380	428	27.1	168 #	536 E	27.1	566 #	71-138	22	30
Perfluoroheptanoic acid (PFHpA)	290	338	27.1	165 #	410	27.1	431 #	72-133	19	30
Perfluorooctanoic acid (PFOA)	120	148	27.1	99 #	187	27.1	242 #	74-146	23	30
Perfluorononanoic acid (PFNA)	28	55.6	27.1	102	66.3	27.1	141	69-148	18	30
Perfluorodecanoic acid (PFDA)	1.8 J	25.9	27.1	89	26.3	27.1	91	73-136	2	30
Perfluoroundecanoic acid (PFUnDA)	1.9 J	28.5	27.1	98	27.8	27.1	96	76-134	3	30
Perfluorododecanoic acid (PFDoDA)	1.3 U	28.7	27.1	106	28.8	27.1	106	71-138	<1	30
Perfluorotridecanoic acid (PFTrDA)	1.3 U	24.0	27.1	89	23.5	27.1	87	65-140	2	30
Perfluorotetradecanoic acid (PFTeDA)	2.0 U	28.3	27.1	104	28.1	27.1	104	63-139	<1	30
Perfluorooctane sulfonamide (FOSA)	0.52 U	24.9	27.1	92	24.1	27.1	89	64-135	3	30
N-Methyl perfluorooctane sulfonamidoacetic acid	1.4 U	22.9	27.1	85	24.4	27.1	90	69-151	6	30
N-Ethyl perfluorooctane sulfonamidoacetic acid	0.50 U	27.8	27.1	103	25.1	27.1	93	58-155	10	30
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	120	145	25.8	84 #	189	25.8	252 #	71-142	26	30
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	8.7	34.2	26.0	98	32.5	26.0	91	69-137	5	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.

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Analyzed:**	03/19/19
Sample Matrix:	Ground Water	**Date Extracted:**	03/18/19

Lab Control Sample Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method:	PFC/537M	**Units:**	ng/L
Prep Method:	EPA 3535A	**Basis:**	NA
		Analysis Lot:	629021

Lab Control Sample
KQ1903443-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	31.5	30.4	104	71-142
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	27.3	30.7	89	69-137
N-Ethyl perfluorooctane sulfonamidoacetic acid	32.1	32.0	100	58-155
N-Methyl perfluorooctane sulfonamidoacetic acid	31.6	32.0	99	69-151
Perfluorobutane sulfonic acid (PFBS)	28.9	28.4	102	61-140
Perfluorobutanoic acid (PFBA)	33.0	32.0	103	51-157
Perfluorodecane sulfonic acid (PFDS)	28.4	30.9	92	69-146
Perfluorodecanoic acid (PFDA)	31.9	32.0	100	73-136
Perfluorododecanoic acid (PFDoDA)	33.9	32.0	106	71-138
Perfluoroheptane sulfonic acid (PFHpS)	32.4	30.5	106	62-178
Perfluoroheptanoic acid (PFHpA)	33.4	32.0	104	72-133
Perfluorohexane sulfonic acid (PFHxS)	25.8	29.2	88	69-144
Perfluorohexanoic acid (PFHxA)	33.4	32.0	105	71-138
Perfluorononanoic acid (PFNA)	35.2	32.0	110	69-148
Perfluorooctane sulfonamide (FOSA)	29.6	32.0	93	64-135
Perfluorooctane sulfonic acid (PFOS)	29.0	29.7	98	71-139
Perfluorooctanoic acid (PFOA)	33.0	32.0	103	74-146
Perfluoropentanoic acid (PFPeA)	32.0	32.0	100	67-127
Perfluorotetradecanoic acid (PFTeDA)	32.5	32.0	101	63-139
Perfluorotridecanoic acid (PFTrDA)	30.1	32.0	94	65-140
Perfluoroundecanoic acid (PFUnDA)	33.4	32.0	104	76-134

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Analyzed:**	03/19/19 12:24
Sample Matrix:	Ground Water	**Date Extracted:**	03/18/19

Method Blank Summary

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Method Blank	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1903443-04	**File ID:**	J:\LCMS06\Data\190319_b1\190319_015
Analysis Method:	PFC/537M	**Analysis Lot:**	629021,629106
Prep Method:	EPA 3535A	**Extraction Lot:**	333105

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1903443-03	J:\LCMS06\Data\190319_b1\190319_016	03/19/19 12:34
EH-B1 030419	K1902064-001	J:\LCMS06\Data\190319_b1\190319_017	03/19/19 12:45
EH-162 030419	K1902064-002	J:\LCMS06\Data\190319_b1\190319_018	03/19/19 12:55
Field Blank 030419	K1902064-003	J:\LCMS06\Data\190319_b1\190319_019	03/19/19 13:05
Equipment Blank 030419	K1902064-004	J:\LCMS06\Data\190319_b1\190319_020	03/19/19 13:16
EH-1 030419	K1902064-005	J:\LCMS06\Data\190319_b1\190319_021	03/19/19 13:26
DUP	K1902064-006	J:\LCMS06\Data\190319_b1\190319_022	03/19/19 13:37
EH-19A 030519	K1902064-007	J:\LCMS06\Data\190319_b1\190319_023	03/19/19 13:47
EH-19A2 030519	K1902064-008	J:\LCMS06\Data\190319_b1\190319_024	03/19/19 13:58
Field Blank 030519	K1902064-009	J:\LCMS06\Data\190319_b1\190319_025	03/19/19 14:08
EH-19B 030519	K1902064-010	J:\LCMS06\Data\190319_b1\190319_026	03/19/19 14:19
EH-19B 030519MS	KQ1903443-01	J:\LCMS06\Data\190319_b1\190319_027	03/19/19 14:29
EH-19B 030519DMS	KQ1903443-02	J:\LCMS06\Data\190319_b1\190319_028	03/19/19 14:40
Equipment Blank 030519	K1902064-011	J:\LCMS06\Data\190319_b1\190319_029	03/19/19 14:50
EH-19A 030519	K1902064-007	J:\LCMS06\Data\190325_b6\190325_014	03/25/19 11:27
EH-19B 030519	K1902064-010	J:\LCMS06\Data\190325_b6\190325_015	03/25/19 11:37

Client:	AECOM	**Service Request:**	K1902064
Project:	PFAS - East Hampton Airport/60566160	**Date Analyzed:**	03/19/19 12:34
Sample Matrix:	Ground Water	**Date Extracted:**	03/18/19

Lab Control Sample Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-LCMS-06
Lab Code:	KQ1903443-03	**File ID:**	J:\LCMS06\Data\190319_b1\190319_016
Analysis Method:	PFC/537M	**Analysis Lot:**	629021,629106
Prep Method:	EPA 3535A	**Extraction Lot:**	333105

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1903443-04	J:\LCMS06\Data\190319_b1\190319_015	03/19/19 12:24
EH-B1 030419	K1902064-001	J:\LCMS06\Data\190319_b1\190319_017	03/19/19 12:45
EH-162 030419	K1902064-002	J:\LCMS06\Data\190319_b1\190319_018	03/19/19 12:55
Field Blank 030419	K1902064-003	J:\LCMS06\Data\190319_b1\190319_019	03/19/19 13:05
Equipment Blank 030419	K1902064-004	J:\LCMS06\Data\190319_b1\190319_020	03/19/19 13:16
EH-1 030419	K1902064-005	J:\LCMS06\Data\190319_b1\190319_021	03/19/19 13:26
DUP	K1902064-006	J:\LCMS06\Data\190319_b1\190319_022	03/19/19 13:37
EH-19A 030519	K1902064-007	J:\LCMS06\Data\190319_b1\190319_023	03/19/19 13:47
EH-19A2 030519	K1902064-008	J:\LCMS06\Data\190319_b1\190319_024	03/19/19 13:58
Field Blank 030519	K1902064-009	J:\LCMS06\Data\190319_b1\190319_025	03/19/19 14:08
EH-19B 030519	K1902064-010	J:\LCMS06\Data\190319_b1\190319_026	03/19/19 14:19
EH-19B 030519MS	KQ1903443-01	J:\LCMS06\Data\190319_b1\190319_027	03/19/19 14:29
EH-19B 030519DMS	KQ1903443-02	J:\LCMS06\Data\190319_b1\190319_028	03/19/19 14:40
Equipment Blank 030519	K1902064-011	J:\LCMS06\Data\190319_b1\190319_029	03/19/19 14:50
EH-19A 030519	K1902064-007	J:\LCMS06\Data\190325_b6\190325_014	03/25/19 11:27
EH-19B 030519	K1902064-010	J:\LCMS06\Data\190325_b6\190325_015	03/25/19 11:37

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900086-01	0.05 PPB ICAL	190301_008	03/01/2019 16:37
02	KC1900086-02	0.10 PPB ICAL	190301_009	03/01/2019 16:48
03	KC1900086-03	0.50 PPB ICAL	190301_010	03/01/2019 16:58
04	KC1900086-04	1.0 PPB ICAL	190301_011	03/01/2019 17:09
05	KC1900086-05	5.0 PPB ICAL	190301_012	03/01/2019 17:19
06	KC1900086-06	10.0 PPB ICAL	190301_013	03/01/2019 17:29
07	KC1900086-07	15.0 PPB ICAL	190301_014	03/01/2019 17:40

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1057	02	5.0000	0.106	03	5.0000	0.09815	04	5.0000	0.1089
05	5.0000	0.1023	06	5.0000	0.1003	07	5.0000	0.09821			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1246	02	5.0000	0.1265	03	5.0000	0.1222	04	5.0000	0.1312
05	5.0000	0.1181	06	5.0000	0.1122	07	5.0000	0.105			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9585	02	5.0000	0.9615	03	5.0000	0.9117	04	5.0000	1.017
05	5.0000	0.9906	06	5.0000	0.9426	07	5.0000	0.9761			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.233	02	5.0000	1.237	03	5.0000	1.178	04	5.0000	1.319
05	5.0000	1.278	06	5.0000	1.33	07	5.0000	1.282			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.878	02	5.0000	0.8434	03	5.0000	0.8365	04	5.0000	0.86
05	5.0000	0.925	06	5.0000	0.9184	07	5.0000	0.9693			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.877	02	5.0000	0.9609	03	5.0000	0.8636	04	5.0000	0.9813
05	5.0000	0.972	06	5.0000	0.9613	07	5.0000	0.9419			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8563	02	5.0000	0.8642	03	5.0000	0.8569	04	5.0000	0.8699
05	5.0000	0.8755	06	5.0000	0.8605	07	5.0000	0.8974			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1285	02	5.0000	0.1221	03	5.0000	0.1205	04	5.0000	0.1226

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5.0000	0.1488	06	5.0000	0.1285	07	5.0000	0.142			

13C4-PFBA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.4205	02	5.0000	0.4369	03	5.0000	0.4059	04	5.0000	0.4475
05	5.0000	0.4618	06	5.0000	0.4647	07	5.0000	0.4796			

13C4-PFHpA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8735	02	5.0000	0.984	03	5.0000	0.761	04	5.0000	1.042
05	5.0000	0.9631	06	5.0000	0.8695	07	5.0000	0.9148			

13C4-PFOA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9148	02	5.0000	0.9582	03	5.0000	0.8431	04	5.0000	0.9498
05	5.0000	0.8857	06	5.0000	0.9365	07	5.0000	0.8991			

13C4-PFOS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1125	02	5.0000	0.1018	03	5.0000	0.09328	04	5.0000	0.1111
05	5.0000	0.11	06	5.0000	0.1066	07	5.0000	0.1097			

13C5-PFNA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.033	02	5.0000	1.029	03	5.0000	0.9483	04	5.0000	1.091
05	5.0000	1.079	06	5.0000	0.9663	07	5.0000	1.018			

13C5-PFPeA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.2744	02	5.0000	0.2795	03	5.0000	0.2616	04	5.0000	0.2892
05	5.0000	0.2949	06	5.0000	0.3107	07	5.0000	0.3102			

13C8-FOSA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3021	02	5.0000	0.3222	03	5.0000	0.2994	04	5.0000	0.3233
05	5.0000	0.3368	06	5.0000	0.351	07	5.0000	0.34			

18O2-PFHxS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.08063	02	5.0000	0.08762	03	5.0000	0.07935	04	5.0000	0.09219
05	5.0000	0.1084	06	5.0000	0.09677	07	5.0000	0.08308			

6:2 Fluorotelomer sulfonic acid (6:2 FTS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0476	1.062	02	0.0951	1.102	03	0.4756	1.13	04	0.9512	1.068
05	4.7558	1.059	06	9.5117	1.015	07	14.2676	0.9644			

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

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

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0480	0.9711	02	0.0960	1.027	03	0.4800	1.005	04	0.9600	0.942
05	4.8002	0.9675	06	9.6004	0.902	07	14.4007	0.8797			

D3-MeFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.2267	02	5.0000	0.2434	03	5.0000	0.2215	04	5.0000	0.2467
05	5.0000	0.2383	06	5.0000	0.2414	07	5.0000	0.2421			

D5-EtFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.244	02	5.0000	0.2499	03	5.0000	0.2347	04	5.0000	0.2517
05	5.0000	0.2421	06	5.0000	0.224	07	5.0000	0.2099			

N-Ethyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.1000	0.5066	03	0.5000	0.5836	04	1.0000	0.5786	05	5.0000	0.5904
06	10.0000	0.6035	07	15.0000	0.6447						

N-Methyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.6717	02	0.1000	0.5035	03	0.5000	0.6424	04	1.0000	0.6001
05	5.0000	0.619	06	10.0000	0.6649	07	15.0000	0.6143			

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0444	1.118	02	0.0887	1.008	03	0.4437	1.067	04	0.8874	1.033
05	4.4368	1.069	06	8.8737	1.096	07	13.3106	1.119			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.1000	0.9825	03	0.5000	0.978	04	1.0000	0.9805	05	5.0000	0.9038
06	10.0000	0.9273	07	15.0000	0.9101						

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.0965	0.7253	03	0.4823	0.95	04	0.9647	0.818	05	4.8233	0.7826
06	9.6467	0.8615	07	14.4700	0.8341						

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.032	02	0.1000	0.918	03	0.5000	0.7844	04	1.0000	0.7823
05	5.0000	0.725	06	10.0000	0.7397	07	15.0000	0.7297			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.6968	02	0.1000	0.6987	03	0.5000	0.6406	04	1.0000	0.6311
05	5.0000	0.5769	06	10.0000	0.5745	07	15.0000	0.5716			

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0477	1.226	02	0.0953	1.229	03	0.4767	1.29	04	0.9534	1.175
05	4.7672	1.091	06	9.5344	1.19	07	14.3016	1.404			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.544	02	0.1000	0.8816	03	0.5000	0.9444	04	1.0000	0.8908
05	5.0000	0.7748	06	10.0000	0.7901	07	15.0000	0.787			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0457	1.181	02	0.0913	1.029	03	0.4565	1.148	04	0.9131	1.023
05	4.5654	1.041	06	9.1308	1.105	07	13.6961	1.089			

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.445	02	0.1000	1.344	03	0.5000	0.9826	04	1.0000	0.9783
05	5.0000	0.8288	06	10.0000	0.8631	07	15.0000	0.8472			

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.8949	02	0.1000	0.8093	03	0.5000	0.6939	04	1.0000	0.7219
05	5.0000	0.661	06	10.0000	0.6841	07	15.0000	0.6868			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.436	02	0.1000	1.267	03	0.5000	1.286	04	1.0000	1.274
05	5.0000	1.316	06	10.0000	1.311	07	15.0000	1.311			

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0465	0.5576	02	0.0929	0.7133	03	0.4646	0.6863	04	0.9292	0.6847
05	4.6461	0.6905	06	9.2923	0.7119	07	13.9384	0.7236			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.227	02	0.1000	1.054	03	0.5000	0.8969	04	1.0000	0.8692
05	5.0000	0.8251	06	10.0000	0.7856	07	15.0000	0.8067			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	8.105	02	0.1000	5.138	03	0.5000	3.035	04	1.0000	2.752
05	5.0000	2.248	06	10.0000	2.23	07	15.0000	2.221			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.307	02	0.1000	0.8288	03	0.5000	0.4545	04	1.0000	0.3994
05	5.0000	0.3455	06	10.0000	0.3468	07	15.0000	0.3433			

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.16	02	0.1000	1.028	03	0.5000	0.932	04	1.0000	0.8927
05	5.0000	0.8501	06	10.0000	0.8925	07	15.0000	0.9078			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.357	02	0.1000	1.158	03	0.5000	0.8491	04	1.0000	0.8423
05	5.0000	0.7647	06	10.0000	0.7723	07	15.0000	0.7757			

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
13C2-6:2 FTS	SURR	Average RF	% RSD	4.1	≤20	0.1028	
13C2-8:2 FTS	SURR	Average RF	% RSD	7.5	≤20	0.1199	
13C2-PFDA	SURR	Average RF	% RSD	3.5	≤20	0.9654	
13C2-PFDoDA	SURR	Average RF	% RSD	4.2	≤20	1.265	
13C2-PFHxA	SURR	Average RF	% RSD	5.5	≤20	0.8901	
13C2-PFTeDA	SURR	Average RF	% RSD	5.0	≤20	0.9369	
13C2-PFUnDA	SURR	Average RF	% RSD	1.7	≤20	0.8687	
13C3-PFBS	SURR	Average RF	% RSD	8.3	≤20	0.1304	
13C4-PFBA	SURR	Average RF	% RSD	5.8	≤20	0.4453	
13C4-PFHpA	SURR	Average RF	% RSD	10.0	≤20	0.9154	
13C4-PFOA	SURR	Average RF	% RSD	4.4	≤20	0.9125	
13C4-PFOS	SURR	Average RF	% RSD	6.4	≤20	0.1064	
13C5-PFNA	SURR	Average RF	% RSD	5.1	≤20	1.023	
13C5-PFPeA	SURR	Average RF	% RSD	6.3	≤20	0.2886	
13C8-FOSA	SURR	Average RF	% RSD	5.9	≤20	0.325	
18O2-PFHxS	SURR	Average RF	% RSD	11.5	≤20	0.08972	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	5.2	≤20	1.057	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	5.5	≤20	0.9563	
D3-MeFOSAA	SURR	Average RF	% RSD	4.0	≤20	0.2372	
D5-EtFOSAA	SURR	Average RF	% RSD	6.4	≤20	0.2366	
N-Ethyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	7.7	≤20	0.5846	
N-Methyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	9.2	≤20	0.6166	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	3.9	≤20	1.073	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	3.9	≤20	0.947	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	9.2	≤20	0.8286	
Perfluorodecanoic acid (PFDA)	TRG	Average RF	% RSD	14.2	≤20	0.8159	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9968	≥0.99	0.6272	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	8.0	≤20	1.229	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9992	≥0.99	0.9447	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Average RF	% RSD	5.6	≤20	1.088	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9905	≥0.99	1.041	

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

		Calibration Evaluation				Calibration Evaluation	
Analyte Name	Compound Type	Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Perfluorononanoic acid (PFNA)	TRG	Linear	R2	0.9997	≥0.99	0.736	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	4.3	≤20	1.314	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	8.3	≤20	0.6811	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9987	≥0.99	0.9234	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9966	≥0.99	3.675	
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9994	≥0.99	0.575	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9994	≥0.99	0.9519	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9999	≥0.99	0.9313	

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1900086-08	1.0 PPB ICV	190301_016	03/01/2019 18:01

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.863	1.073E0	1.044E0	-2.711	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.781	1.088E0	9.306E-1	-14.467	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.791	1.229E0	1.02E0	-17.026	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.980	6.811E-1	7.184E-1	5.48	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.08	8.286E-1	9.242E-1	11.54	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.957	9.47E-1	9.067E-1	-4.256	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.964	3.675E0	2.498E0	-3.645	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.947	1.041E0	8.761E-1	-5.277	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	1.05	9.447E-1	8.562E-1	4.96	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.903	9.234E-1	7.648E-1	-9.714	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.969	7.36E-1	6.717E-1	-3.085	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.922	8.159E-1	7.521E-1	-7.818	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	0.977	9.313E-1	7.847E-1	-2.301	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.949	6.272E-1	5.734E-1	-5.126	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.991	9.519E-1	8.966E-1	-0.869	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.997	5.75E-1	3.924E-1	-0.330	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.988	1.314E0	1.299E0	-1.212	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.06	6.166E-1	6.546E-1	6.17	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	1.10	5.846E-1	6.401E-1	9.50	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.935	1.057E0	1.039E0	-1.675	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.924	9.563E-1	9.203E-1	-3.761	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	4.60	1.304E-1	1.201E-1	-7.902	±30	Average RF
18O2-PFHxS	5.00	5.82	8.972E-2	1.045E-1	16.43	±30	Average RF
13C4-PFOS	5.00	4.36	1.064E-1	9.283E-2	-12.786	±30	Average RF
13C4-PFBA	5.00	4.82	4.453E-1	4.296E-1	-3.511	±30	Average RF
13C5-PFPeA	5.00	4.90	2.886E-1	2.828E-1	-2.034	±30	Average RF
13C2-PFHxA	5.00	4.84	8.901E-1	8.618E-1	-3.174	±30	Average RF
13C4-PFHpA	5.00	5.19	9.154E-1	9.508E-1	3.86	±30	Average RF
13C4-PFOA	5.00	5.13	9.125E-1	9.366E-1	2.65	±30	Average RF

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport **Calibration Date:** 3/1/2019

Initial Calibration Verification Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Calibration ID: KC1900086 **Signal ID:** 1
Instrument ID: K-LCMS-06

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C5-PFNA	5.00	4.68	1.023E0	9.587E-1	-6.320	±30	Average RF
13C2-PFDA	5.00	4.73	9.654E-1	9.13E-1	-5.435	±30	Average RF
13C2-PFUnDA	5.00	4.95	8.687E-1	8.601E-1	-0.992	±30	Average RF
13C2-PFDoDA	5.00	5.06	1.265E0	1.281E0	1.25	±30	Average RF
13C2-PFTeDA	5.00	4.83	9.369E-1	9.045E-1	-3.455	±30	Average RF
13C8-FOSA	5.00	5.03	3.25E-1	3.269E-1	0.583	±30	Average RF
D3-MeFOSAA	5.00	4.88	2.372E-1	2.316E-1	-2.337	±30	Average RF
D5-EtFOSAA	5.00	5.19	2.366E-1	2.456E-1	3.82	±30	Average RF
13C2-6:2 FTS	5.00	5.08	1.028E-1	1.045E-1	1.61	±30	Average RF
13C2-8:2 FTS	5.00	5.14	1.199E-1	1.234E-1	2.85	±30	Average RF

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160 **Date Analyzed:** 03/19/19 12:03

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Calibration Date:** 3/1/2019
File ID: J:\LCMS06\Data\190319_b1\190319_013 **Calibration ID:** KC1900086
Signal ID: 1 **Analysis Lot:** 629021
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.987	1.073	1.193	111	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.823	1.088	0.9804	90.1	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	0.821	1.2295	1.0586	86.1	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.853	0.6811	0.6253	91.8	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.901	0.8286	0.7738	93.4	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.07	0.947	1.0106	107	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.07	3.6755	2.7335	107	6.6	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	1.02	1.0412	0.9433	102	2.3	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	1.07	0.9447	0.8715	107	6.9	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	1.04	0.9234	0.8767	104	3.9	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	1.08	0.736	0.7497	108	8.4	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.977	0.8159	0.7972	97.7	NA	±30	Average RF
Perfluoroundecanoic acid (PFUnDA)	1.00	1.07	0.9313	0.8537	107	6.7	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	1.00	0.6272	0.6044	100	0.1	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.997	0.9519	0.9017	99.7	-0.3	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	1.12	0.575	0.4342	112	11.8	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.947	1.3144	1.2441	94.7	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.17	0.6166	0.7221	117	NA	±30	Average RF
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	0.895	0.5846	0.5233	89.5	NA	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.981	1.0572	1.0902	103	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	0.921	0.9563	0.9176	96.0	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	5.23	0.1304	0.1365	105	NA	±30	Average RF
18O2-PFHxS	5.00	5.94	0.0897	0.1066	119	NA	±30	Average RF
13C4-PFOS	5.00	5.90	0.1064	0.1257	118	NA	±30	Average RF
13C4-PFBA	5.00	5.18	0.4453	0.4613	104	NA	±30	Average RF
13C5-PFPeA	5.00	5.16	0.2886	0.2977	103	NA	±30	Average RF
13C2-PFHxA	5.00	4.84	0.8901	0.8614	96.8	NA	±30	Average RF
13C4-PFHpA	5.00	5.53	0.9154	1.0116	111	NA	±30	Average RF
13C4-PFOA	5.00	5.59	0.9125	1.0198	112	NA	±30	Average RF
13C5-PFNA	5.00	5.36	1.0234	1.0973	107	NA	±30	Average RF

Client: AECOM **Service Request:** K1902064
Project: PFAS - East Hampton Airport/60566160 **Date Analyzed:** 03/19/19 12:03

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Calibration Date:** 3/1/2019
File ID: J:\LCMS06\Data\190319_b1\190319_013 **Calibration ID:** KC1900086
Signal ID: 1 **Analysis Lot:** 629021
Units: ng/mL

13C2-PFDA	5.00	5.05	0.9654	0.9748	101	NA	±30	Average RF
13C2-PFUnDA	5.00	5.14	0.8687	0.8936	103	NA	±30	Average RF
13C2-PFDoDA	5.00	5.05	1.2653	1.2784	101	NA	±30	Average RF
13C2-PFTeDA	5.00	5.10	0.9369	0.9552	102	NA	±30	Average RF
13C8-FOSA	5.00	4.78	0.325	0.3106	95.6	NA	±30	Average RF
D3-MeFOSAA	5.00	3.34	0.2372	0.1585	66.8*	NA	±30	Average RF
D5-EtFOSAA	5.00	3.74	0.2366	0.177	74.8	NA	±30	Average RF
13C2-6:2 FTS	5.00	6.30	0.1028	0.1296	126	NA	±30	Average RF
13C2-8:2 FTS	5.00	5.26	0.1199	0.1263	105	NA	±30	Average RF

Client: AECOM
Project: PFAS - East Hampton Airport/60566160

Service Request: K1902064
Date Analyzed: 03/25/19 11:06

Continuing Calibration Verification (CCV) Summary
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\190325_b6\190325_012
Signal ID: 1

Calibration Date: 3/1/2019
Calibration ID: KC1900086
Analysis Lot: 629106
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.783	1.088	0.9336	85.8	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.884	0.6811	0.6479	95.1	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.05	3.6755	2.6868	105	4.6	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	1.02	1.0412	0.9448	102	2.4	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	1.07	0.9447	0.8687	107	6.6	±30	Linear
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.999	1.0572	1.11	105	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
18O2-PFHxS	5.00	6.88	0.0897	0.1235	138*	NA	±30	Average RF
13C4-PFOS	5.00	5.62	0.1064	0.1197	112	NA	±30	Average RF
13C5-PFPeA	5.00	5.25	0.2886	0.3033	105	NA	±30	Average RF
13C2-PFHxA	5.00	5.26	0.8901	0.9366	105	NA	±30	Average RF
13C4-PFHpA	5.00	5.35	0.9154	0.9801	107	NA	±30	Average RF
13C2-6:2 FTS	5.00	5.84	0.1028	0.1201	117	NA	±30	Average RF

Client: AECOM **Service Request:**K1902064
Project: PFAS - East Hampton Airport/60566160

Analysis Run Log
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Analysis Lot:**629021
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190319_b1\190319_013	Continuing Calibration Verification	KQ1903668-01	3/19/2019	12:03	
J:\LCMS06\Data\190319_b1\190319_014	Continuing Calibration Blank	KQ1903668-02	3/19/2019	12:13	
J:\LCMS06\Data\190319_b1\190319_015	Method Blank	KQ1903443-04	3/19/2019	12:24	
J:\LCMS06\Data\190319_b1\190319_016	Lab Control Sample	KQ1903443-03	3/19/2019	12:34	
J:\LCMS06\Data\190319_b1\190319_017	EH-B1 030419	K1902064-001	3/19/2019	12:45	
J:\LCMS06\Data\190319_b1\190319_018	EH-162 030419	K1902064-002	3/19/2019	12:55	
J:\LCMS06\Data\190319_b1\190319_019	Field Blank 030419	K1902064-003	3/19/2019	13:05	
J:\LCMS06\Data\190319_b1\190319_020	Equipment Blank 030419	K1902064-004	3/19/2019	13:16	
J:\LCMS06\Data\190319_b1\190319_021	EH-1 030419	K1902064-005	3/19/2019	13:26	
J:\LCMS06\Data\190319_b1\190319_022	DUP	K1902064-006	3/19/2019	13:37	
J:\LCMS06\Data\190319_b1\190319_023	EH-19A 030519	K1902064-007	3/19/2019	13:47	
J:\LCMS06\Data\190319_b1\190319_024	EH-19A2 030519	K1902064-008	3/19/2019	13:58	
J:\LCMS06\Data\190319_b1\190319_025	Field Blank 030519	K1902064-009	3/19/2019	14:08	
J:\LCMS06\Data\190319_b1\190319_026	EH-19B 030519	K1902064-010	3/19/2019	14:19	
J:\LCMS06\Data\190319_b1\190319_027	EH-19B 030519 MS	KQ1903443-01	3/19/2019	14:29	
J:\LCMS06\Data\190319_b1\190319_028	EH-19B 030519 DMS	KQ1903443-02	3/19/2019	14:40	
J:\LCMS06\Data\190319_b1\190319_029	Equipment Blank 030519	K1902064-011	3/19/2019	14:50	
J:\LCMS06\Data\190319_b1\190319_030	ZZZZZZZ	ZZZZZZZ	3/19/2019	15:01	
J:\LCMS06\Data\190319_b1\190319_031	ZZZZZZZ	ZZZZZZZ	3/19/2019	15:11	
J:\LCMS06\Data\190319_b1\190319_032	ZZZZZZZ	ZZZZZZZ	3/19/2019	15:21	
J:\LCMS06\Data\190319_b1\190319_033	ZZZZZZZ	ZZZZZZZ	3/19/2019	15:32	
J:\LCMS06\Data\190319_b1\190319_034	ZZZZZZZ	ZZZZZZZ	3/19/2019	15:42	
J:\LCMS06\Data\190319_b1\190319_035	ZZZZZZZ	ZZZZZZZ	3/19/2019	15:53	
J:\LCMS06\Data\190319_b1\190319_036	ZZZZZZZ	ZZZZZZZ	3/19/2019	16:03	
J:\LCMS06\Data\190319_b1\190319_037	ZZZZZZZ	ZZZZZZZ	3/19/2019	16:14	

Client: AECOM **Service Request:**K1902064
Project: PFAS - East Hampton Airport/60566160

Analysis Run Log
Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Analysis Method: PFC/537M **Analysis Lot:**629106
Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\190325_b6\190325_012	Continuing Calibration Verification	KQ1904043-01	3/25/2019	11:06	
J:\LCMS06\Data\190325_b6\190325_013	Continuing Calibration Blank	KQ1904043-02	3/25/2019	11:16	
J:\LCMS06\Data\190325_b6\190325_014	EH-19A 030519	K1902064-007	3/25/2019	11:27	
J:\LCMS06\Data\190325_b6\190325_015	EH-19B 030519	K1902064-010	3/25/2019	11:37	
J:\LCMS06\Data\190325_b6\190325_016	ZZZZZZZ	ZZZZZZZ	3/25/2019	11:48	
J:\LCMS06\Data\190325_b6\190325_017	ZZZZZZZ	ZZZZZZZ	3/25/2019	11:58	

Prep Summary Report

Client: AECOM **Service Request:**K1902064
Project: PFAS - East Hampton Airport/60566160
Sample Matrix: Ground Water

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS

Prep Method: EPA 3535A **Extraction Lot:** 333105
Analytical Method: PFC/537M **Extraction Date:** 03/18/19 08:59

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
EH-B1 030419	K1902064-001	3/4/19	3/8/19	285.0000 mL	8 mL	
EH-162 030419	K1902064-002	3/4/19	3/8/19	300.0000 mL	8 mL	
Field Blank 030419	K1902064-003	3/4/19	3/8/19	295.0000 mL	8 mL	
Equipment Blank 030419	K1902064-004	3/4/19	3/8/19	285.0000 mL	8 mL	
EH-1 030419	K1902064-005	3/4/19	3/8/19	295.0000 mL	8 mL	
DUP	K1902064-006	3/4/19	3/8/19	305.0000 mL	8 mL	
EH-19A 030519	K1902064-007	3/5/19	3/8/19	320.0000 mL	8 mL	
EH-19A2 030519	K1902064-008	3/5/19	3/8/19	310.0000 mL	8 mL	
Field Blank 030519	K1902064-009	3/5/19	3/8/19	285.0000 mL	8 mL	
EH-19B 030519	K1902064-010	3/5/19	3/8/19	300.0000 mL	8 mL	
Equipment Blank 030519	K1902064-011	3/5/19	3/8/19	305.0000 mL	8 mL	
Matrix Spike	KQ1903443-01MS	3/5/19	3/8/19	295.0000 mL	8 mL	
Duplicate Matrix Spike	KQ1903443-02DMS	3/5/19	3/8/19	295.0000 mL	8 mL	
Lab Control Sample	KQ1903443-03LCS	NA	NA	250 mL	8 mL	
Method Blank	KQ1903443-04MB	NA	NA	250 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

Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/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#: 333105
Team: Organic LC/NHILLIKER
Number of Copies to make: 2

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

Status: Prepped
Prep Date/Time: 3/18/19 08:59 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1902064-001	EH-B1 030419	.01	PFC/537M/PFOA		Ground Water	285.0000mL	8.00mL	
2	K1902064-002	EH-162 030419	.01	PFC/537M/PFOA		Ground Water	300.0000mL	8.00mL	
3	K1902064-003	Field Blank 030419	.01	PFC/537M/PFOA		Ground Water	295.0000mL	8.00mL	
4	K1902064-004	Equipment Blank 030419	.01	PFC/537M/PFOA		Ground Water	285.0000mL	8.00mL	
5	K1902064-005	EH-1 030419	.01	PFC/537M/PFOA		Ground Water	295.0000mL	8.00mL	
6	K1902064-006	DUP	.01	PFC/537M/PFOA		Ground Water	305.0000mL	8.00mL	
7	K1902064-007	EH-19A 030519	.01	PFC/537M/PFOA		Ground Water	320.0000mL	8.00mL	
8	K1902064-008	EH-19A2 030519	.01	PFC/537M/PFOA		Ground Water	310.0000mL	8.00mL	
9	K1902064-009	Field Blank 030519	.01	PFC/537M/PFOA		Ground Water	285.0000mL	8.00mL	
10	K1902064-010	EH-19B 030519	.01	PFC/537M/PFOA		Ground Water	300.0000mL	8.00mL	
11	K1902064-011	Equipment Blank 030519	.01	PFC/537M/PFOA		Ground Water	305.0000mL	8.00mL	
12	K1902298-001	Amenities-1st Fl Kitchen	.01	PFC/537M/PFOA		Water	290.0000mL	8.00mL	
13	K1902298-002	Amenities-2nd Fl Kit.	.01	PFC/537M/PFOA		Water	295.0000mL	8.00mL	
14	K1902298-003	Ops1-2nd Fl-N. Lounge	.01	PFC/537M/PFOA		Water	285.0000mL	8.00mL	
15	K1902298-004	Ops1-1st Fl-Lounge	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
16	K1902298-005	Ops2-1st Fl-Break Rm	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
17	K1902298-006	Ops2-2nd Fl-Break Rm	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
18	K1902298-007	Ops3-Break Room	.01	PFC/537M/PFOA		Water	320.0000mL	8.00mL	
19	K1902298-008	Ops3-Mens Room	.01	PFC/537M/PFOA		Water	300.0000mL	8.00mL	
20	KQ1903443-01	K1902064-010 MS	.01	PFC/537M/PFOA		Liquid	295.0000mL	8.00mL	
21	KQ1903443-02	K1902064-010 DMS	.01	PFC/537M/PFOA		Liquid	295.0000mL	8.00mL	
22	KQ1903443-03	LCS		PFC/537M/PFOA		Liquid	250mL	8.00mL	
23	KQ1903443-04	MB		PFC/537M/PFOA		Liquid	250mL	8.00mL	

Spiking Solutions

Name: PFC IS Inventory ID 196815 Logbook Ref: 19-OLC-01-05M Expires On: 08/05/2019

K1902064-001	10.00µL	K1902064-002	10.00µL	K1902064-003	10.00µL	K1902064-004	10.00µL	K1902064-005	10.00µL	K1902064-006	10.00µL
K1902064-007	10.00µL	K1902064-008	10.00µL	K1902064-009	10.00µL	K1902064-010	10.00µL	K1902064-011	10.00µL	K1902298-001	10.00µL
K1902298-002	10.00µL	K1902298-003	10.00µL	K1902298-004	10.00µL	K1902298-005	10.00µL	K1902298-006	10.00µL	K1902298-007	10.00µL
K1902298-008	10.00µL	KQ1903443-01	10.00µL	KQ1903443-02	10.00µL	KQ1903443-03	10.00µL	KQ1903443-04	10.00µL		

Name: PFC isotopes 2ppm Inventory ID 197729 Logbook Ref: 19-OLC-01-17A Expires On: 09/12/2019

K1902064-001	20.00µL	K1902064-002	20.00µL	K1902064-003	20.00µL	K1902064-004	20.00µL	K1902064-005	20.00µL	K1902064-006	20.00µL

Preparation Information Benchsheet

Prep Run#: 333105
Team: Organic LC/NHILLIKER
Prep WorkFlow: OrgExtAq(14)
Prep Method: EPA 3535A
Status: Prepped
Prep Date/Time: 3/18/19 08:59 AM

K1902064-007	20.00µL	K1902064-008	20.00µL	K1902064-009	20.00µL	K1902064-010	20.00µL	K1902064-011	20.00µL	K1902298-001	20.00µL
K1902298-002	20.00µL	K1902298-003	20.00µL	K1902298-004	20.00µL	K1902298-005	20.00µL	K1902298-006	20.00µL	K1902298-007	20.00µL
K1902298-008	20.00µL	KQ1903443-01	20.00µL	KQ1903443-02	20.00µL	KQ1903443-03	20.00µL	KQ1903443-04	20.00µL		

Name: PFC isotopes 2ppm Inventory ID 197797 Logbook Ref: 19-OLC-01-17D Expires On: 12/04/2023

K1902064-001	20.00µL	K1902064-002	20.00µL	K1902064-003	20.00µL	K1902064-004	20.00µL	K1902064-005	20.00µL	K1902064-006	20.00µL
K1902064-007	20.00µL	K1902064-008	20.00µL	K1902064-009	20.00µL	K1902064-010	20.00µL	K1902064-011	20.00µL	K1902298-001	20.00µL
K1902298-002	20.00µL	K1902298-003	20.00µL	K1902298-004	20.00µL	K1902298-005	20.00µL	K1902298-006	20.00µL	K1902298-007	20.00µL
K1902298-008	20.00µL	KQ1903443-01	20.00µL	KQ1903443-02	20.00µL	KQ1903443-03	20.00µL	KQ1903443-04	20.00µL		

Name: PFC Targets 200ppb Inventory ID 197857 Logbook Ref: 19-OLC-02-10E Expires On: 08/05/2019

KQ1903443-01	40.00µL	KQ1903443-02	40.00µL	KQ1903443-03	40.00µL

Preparation Steps

Step:	Extraction	Step:	Final Volume
Started:	3/18/19 08:59	Started:	3/18/19 19:29
Finished:	3/18/19 19:29	Finished:	3/19/19 10:30
By:	NHILLIKER	By:	NHILLIKER
Comments		Comments	

Comments: _____

Reviewed By: cmuller Date: 3/21/19

Chain of Custody

Relinquished By: Noah Hilliker Date: 3/19/19

Received By: Cmuller Date: 3/19/19

Extracts Examined: (Yes) No

Preparation Information Benchsheet

Prep Run#: 333105 **Prep WorkFlow:** OrgExtAq(14) **Status:** Draft
Team: Organic LC/NHILLIKER **Prep Method:** EPA 3535A **Prep Date/Time:** 3/18/19 08:59 AM
Number of Copies to make: 2

#	Lab Code	Client ID	B#	√	Method /Test	Matrix	Amt. Ext. (mL)	pH	Int. Vol	Final Vol	Surr Amt (µL)	Spike Amt (µL)
1	**K1902064-001**	EH-B1 030419	.01	✓	PFC/537M / PFOA	Ground Water	285	3.5	N/A	8 mL	20/20	N/A
2	**K1902064-002**	EH-162 030419	.01	✓	PFC/537M / PFOA	Ground Water	300					
3	**K1902064-003**	Field Blank 030419	.01	✓	PFC/537M / PFOA	Ground Water	295					
4	**K1902064-004**	Equipment Blank 030419	.01	✓	PFC/537M / PFOA	Ground Water	285					
5	**K1902064-005**	EH-1 030419	.01	✓	PFC/537M / PFOA	Ground Water	295					
6	**K1902064-006**	DUP	.01	✓	PFC/537M / PFOA	Ground Water	305					
7	**K1902064-007**	EH-19A 030519 *	.01	✓	PFC/537M / PFOA	Ground Water	320					
8	**K1902064-008**	EH-19A2 030519 *	.01	✓	PFC/537M / PFOA	Ground Water	310					
9	**K1902064-009**	Field Blank 030519	.01	✓	PFC/537M / PFOA	Ground Water	285					
10	**K1902064-010**	EH-19B 030519 *	.01	✓	PFC/537M / PFOA	Ground Water	300					
11	**K1902064-011**	Equipment Blank 030519	.01	✓	PFC/537M / PFOA	Ground Water	305					
12	**K1902298-001**	Amenities-1st Fl Kitchen	.01	✓	PFC/537M / PFOA	Water	290					
13	**K1902298-002**	Amenities-2nd Fl Kit.	.01	✓	PFC/537M / PFOA	Water	295					
14	**K1902298-003**	Ops1-2nd Fl-N. Lounge	.01	✓	PFC/537M / PFOA	Water	285					
15	**K1902298-004**	Ops1-1st Fl-Lounge	.01	✓	PFC/537M / PFOA	Water	300					
16	**K1902298-005**	Ops2-1st Fl-Break Rm	.01	✓	PFC/537M / PFOA	Water	300					
17	**K1902298-006**	Ops2-2nd Fl-Break Rm	.01	✓	PFC/537M / PFOA	Water	300					
18	**K1902298-007**	Ops3-Break Room	.01	✓	PFC/537M / PFOA	Water	320					
19	**K1902298-008**	Ops3-Mens Room	.01	✓	PFC/537M / PFOA	Water	300					
20	**KQ1903443-01**	K1902064-010 MS *	.01	✓	PFC/537M / PFOA	Liquid	295					40
21	**KQ1903443-02**	K1902064-010 DMS *	.01	✓	PFC/537M / PFOA	Liquid	295					
22	**KQ1903443-03**	LCS			PFC/537M / PFOA	Liquid	250					
23	**KQ1903443-04**	MB			PFC/537M / PFOA	Liquid	↓	↓	↓	↓	↓	N/A

* Samples exhibited sediment bed on bottom of bottle. All samples were centrifuged after each rinse step but before each respective elution to make passage through SPE feasible (exception: sample 2064-7 was centrifuged only once after the first rinse which packed the sediment well enough that centrifuging after the second rinse was unnecessary)

Comments: pipettes: DB (surrogate + spike)

Surrogate ID: ✓19-OLC-01-170 20µL/2ppm xp: 12/4/23
✓19-OLC-01-171 20µL/2ppm xp: 9/12/19

Spike ID: ✓19-OLC-02-10E 40µL/200ppb xp: 8/5/19

Witnessed By:

Analyst: Noah Hilliker

Assisted By:

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

Waters

Service Request K1902064/2298 **Workgroup** KQ1903443

6cc 200mg Strata XL-AW Cartridge Sorbent Lot # S322-0023

Envi-Carb Lot # N/A

0.1% NH_4OH in MeOH Lot# 19-OLC-02-08P MeOH Lot# DV408-US

Reagent Water Lot# 58201

Acetic Acid (LCMS Grade) Lot# SHBH2391V

25% NH_4OH Lot# Fluka H2020

Extraction (Manifold) Start (Time/Date/Initial): 3:55 pm 3/18/19 NH

Extraction (Manifold) Stop (Time/Date/Initial): 7:29 pm 3/18/19 NH

IS solution (13C7-PFUnDA 500ppb) Lot #: 19-OLC-01-05M

Nylon Filter Lot#: 81412103

Extract Storage: Waterdeep

Completed(Time/Date/Initial): 10:30 am* 3/19/19 NH

Comments/Observations:

* Analyst estimate

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

1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_017
Lab ID: K1902064-001
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 12:45
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_017	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:45	**Vial:**	3
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-001	**Raw Units:**	ng/mL

Bottle ID:	K1902064-001.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.107	-0.01	7011971	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.008	0.00	634464	3.4687	69	20 - 109	Y
18O2-PFHxS	4.407	0.00	560747	4.4569	89	26 - 122	Y
13C4-PFOS	4.730	0.00	680229	4.5570	91	25 - 121	Y
13C4-PFBA	3.223	-0.13	2468076	3.9525	79	27 - 124	Y
13C5-PFPeA	3.958	0.00	1624287	4.0128	80	27 - 138	Y
13C2-PFHxA	4.227	0.00	4959670	3.9733	79	28 - 132	Y
13C4-PFHpA	4.408	0.00	5721097	4.4563	89	19 - 139	Y
13C4-PFOA	4.576		5164022	4.0355	81	22 - 130	Y
13C5-PFNA	4.747	0.00	5994661	4.1768	84	20 - 127	Y
13C2-PFDA	4.928	0.00	5145041	3.8001	76	24 - 125	Y
13C2-PFUnDA	5.107	-0.01	4646407	3.8141	76	22 - 125	Y
13C2-PFDoDA	5.286	0.00	6195950	3.4917	70	19 - 122	Y
13C2-PFTeDA	5.604	+0.00	4985884	3.7949	76	13 - 124	Y
13C8-FOSA	5.247	+0.00	1706036	3.7433	75	18 - 109	Y
D3-MeFOSAA	5.032	-0.01	778903	2.3419	47	9 - 123	Y
D5-EtFOSAA	5.128	0.00	826967	2.4924	50	12 - 126	Y
13C2-6:2 FTS	4.566	0.00	799085	5.5426	111	10 - 226	Y
13C2-8:2 FTS	4.926	0.00	795538	4.7295	95	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	19961	0.1466	4.1	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.406	0.00	249243	2.0424	57		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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_017	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:45	**Vial:**	3
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-001	**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)	4.566	0.00	24623	0.1786	5.0		Y
Perfluorooctane sulfonic acid (PFOS)	4.675	-0.06	378974	4.0895	110		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.348	-0.01	216760	0.4637	13		Y
Perfluoropentanoic acid (PFPeA)	3.958	0.00	622207	0.7092	20		Y
Perfluorohexanoic acid (PFHxA)	4.225	0.00	1050055	1.1518	32		Y
Perfluoroheptanoic acid (PFHpA)	4.407	0.00	348877	0.3481	9.8		Y
Perfluorooctanoic acid (PFOA)	4.575	0.00	765221	0.8739	25		Y
Perfluorononanoic acid (PFNA)	4.744	-0.01	53239	0.0483	1.4	J	Y
Perfluorodecanoic acid (PFDA)	4.911	-0.02	21962	0.0262	0.74	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.100	-0.01	22983	-0.0082	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.282	-0.01	15803	0.0111	0.31	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.452	0.00	13145	0.0006	0.017	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.604	+0.00	50835	0.0081	0.23	U	Y
Perfluorooctane sulfonamide (FOSA)	5.243	0.00	1103	0.0025	0.070	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.034	-0.01	793	0.0083	0.23	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.141	+0.01	543	0.0056	0.16	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.565	0.00	42813	0.2534	7.1		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.925	0.00	282	0.0019	0.053	U	Y

Prep Amount:	285.0000 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 3/21/2019 9:48:23 AM

190319_017

Sample ID: K1902064-001
Date acquired: 3/19/2019 12:45:04 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_017.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.223	2468076	2468076	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.223	2468076	7011971	26	3.9525	ng/mL	----
PFBA	Auto	3.348	216760	2468076	2	0.4637	ng/mL	----
PFPeA-13C_IS	Auto	3.958	1624287	1624287	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.958	1624287	7011971	26	4.0128	ng/mL	----
PFPeA	Auto	3.958	622207	1624287	4	0.7092	ng/mL	----
PFBS_1	Auto	4.006	19961	634464	16	0.1466	ng/mL	----
PFBS-13C	Auto	4.008	634464	7011971	26	3.4687	ng/mL	----
PFBS-13C_IS	Auto	4.008	634464	634464	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.227	4959670	4959670	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.227	4959670	7011971	26	3.9733	ng/mL	----
PFHxA	Auto	4.225	1050055	4959670	6	1.1518	ng/mL	----
PFHpA	Auto	4.407	348877	5721097	8	0.3481	ng/mL	----
PFHpA-13C_IS	Auto	4.408	5721097	5721097	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.408	5721097	7011971	26	4.4563	ng/mL	----
PFHxS-18O_IS	Auto	4.407	560747	560747	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.407	560747	7011971	26	4.4569	ng/mL	----
PFHxS_1	Auto	4.406	249243	560747	7	2.0424	ng/mL	----
6_2-FTS-13C	Auto	4.566	799085	7011971	26	5.5426	ng/mL	----
6_2-FTS-13C_IS	Auto	4.566	799085	799085	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.565	42813	799085	10	0.2534	ng/mL	----
PFHpS_1	Auto	4.566	24623	560747	7	0.1786	ng/mL	----
PFOA-13C_IS	Auto	4.576	5164022	5164022	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.576	5164022	7011971	26	4.0355	ng/mL	----
PFOA	Auto	4.575	765221	5164022	9	0.8739	ng/mL	----
PFOS_1	Auto	4.675	378974	680229	13	4.0895	ng/mL	----
PFOS-13C_IS	Auto	4.730	680229	680229	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.730	680229	7011971	26	4.5570	ng/mL	----
PFNA-13C_IS	Auto	4.747	5994661	5994661	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.747	5994661	7011971	26	4.1768	ng/mL	----
PFNA	M	4.744	53239	5994661	11	0.0483	ng/mL	----
PFDA-13C_IS	Auto	4.928	5145041	5145041	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.928	5145041	7011971	26	3.8001	ng/mL	----
PFDA	Auto	4.911	21962	5145041	12	0.0262	ng/mL	----
8_2-FTS-13C_IS	Auto	4.926	795538	795538	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.926	795538	7011971	26	4.7295	ng/mL	----
8_2-FTS_1	M	4.925	282	795538	15	0.0019	ng/mL	----
PFUnA	Auto	5.100	22983	4646407	14	-0.0082	ng/mL	----
PFUnA-13C_IS	Auto	5.107	4646407	4646407	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.107	4646407	7011971	26	3.8141	ng/mL	----
PFDoA	Auto	5.282	15803	6195950	17	0.0111	ng/mL	----
PFDoA-13C	Auto	5.286	6195950	7011971	26	3.4917	ng/mL	----
PFDoA-13C_IS	Auto	5.286	6195950	6195950	17	5.0000	ng/mL	----
PFTrDA	Auto	5.452	13145	4985884	22	0.0006	ng/mL	----
PFTeDA	Auto	5.604	50835	4985884	22	0.0081	ng/mL	----
PFTeDA-13C	Auto	5.604	4985884	7011971	26	3.7949	ng/mL	----
PFTeDA-13C_IS	Auto	5.604	4985884	4985884	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.247	1706036	1706036	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.247	1706036	7011971	26	3.7433	ng/mL	----
FOSA	M	5.243	1103	1706036	18	0.0025	ng/mL	----
N-MeFOSAA	Auto	5.034	793	778903	19	0.0083	ng/mL	----
N-MeFOSAA-d3	Auto	5.032	778903	7011971	26	2.3419	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.032	778903	778903	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.141	543	826967	21	0.0056	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.128	826967	826967	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.128	826967	7011971	26	2.4924	ng/mL	----
13C7-PFUnDA_IS	Auto	5.107	7011971	7011971	26	5.0000	ng/mL	----

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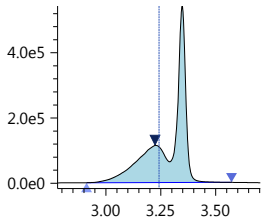
PFBA-13C_IS
Conc 5.0000
RT 3.223 Area 2468076
ISTD 216.90>172.15 (-) 5.43e5



PFBA-13C
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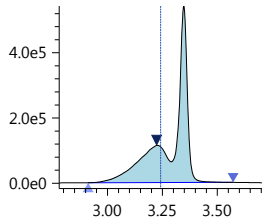
RT 3.223 Area 2468076
Q 216.90>172.15 (-) 5.43e5



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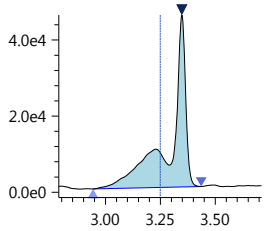
Q 213.00>169.10 (-) 4.66e4



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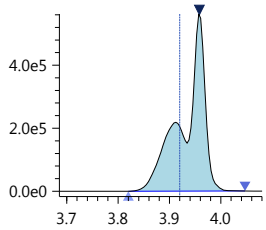

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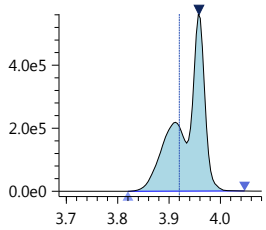

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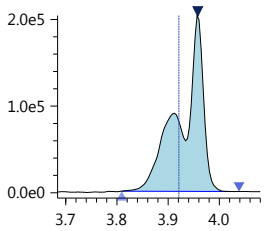

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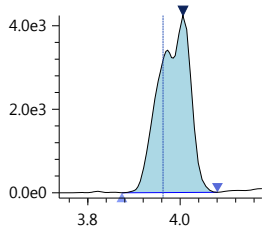

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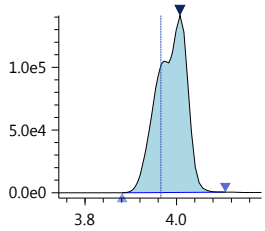

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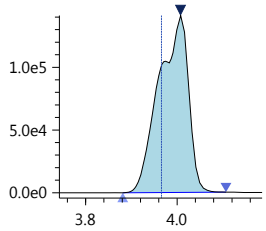

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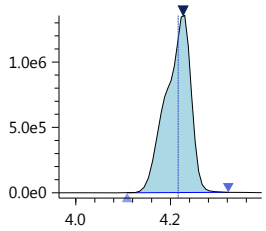
ISTD 314.90>270.10 (-) 1.36e6



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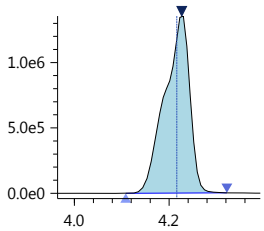

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Conc 1.1518
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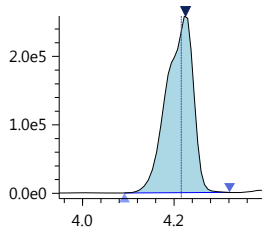
Q 313.00>269.00 (-) 2.59e5



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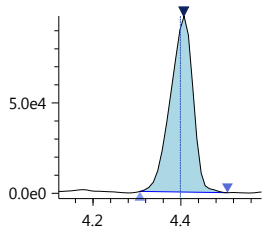

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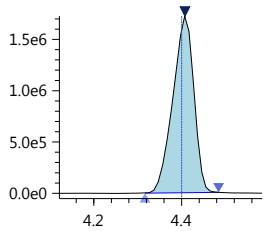
ISTD 366.90>322.10 (-) 1.73e6



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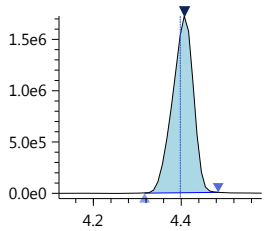
Conc 4.4563
RT 4.408 Area 5721097
Q 366.90>322.10 (-) 1.73e6



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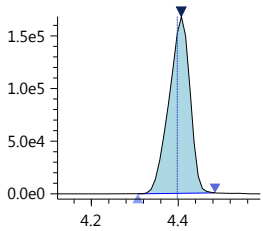
Conc 5.0000
RT 4.407 Area 560747
ISTD 402.70>84.05 (-) 1.68e5



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Conc 4.4569
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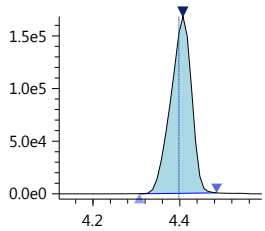
Q 402.70>84.05 (-) 1.68e5



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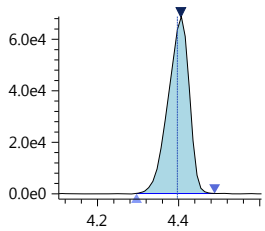
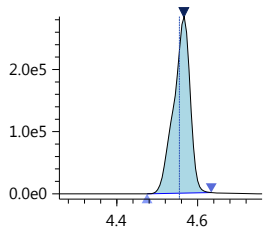
Conc 2.0424
RT 4.406 Area 249243
Q 399.00>80.00 (-) 6.88e4



6_2-FTS-13C
Conc 5.5426
RT 4.566 Area 799085
Q 428.90>409.00 (-) 2.85e5



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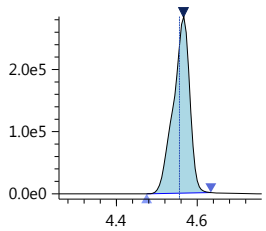
RT 4.566 Area 799085
ISTD 428.90>409.00 (-) 2.85e5



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Conc 0.2534
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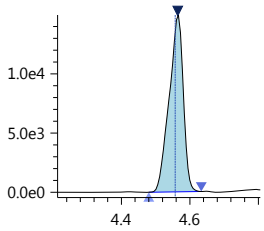
Q 427.00>407.00 (-) 1.50e4



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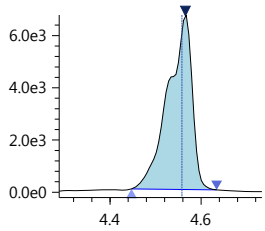

PFOA-13C_IS
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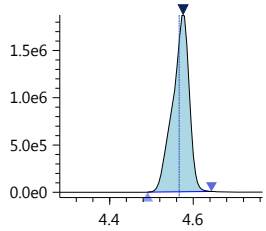

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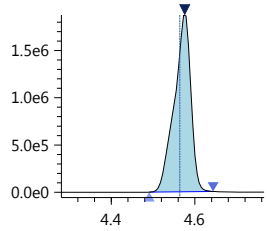
RT 4.576 Area 5164022
Q 416.80>372.05 (-) 1.88e6



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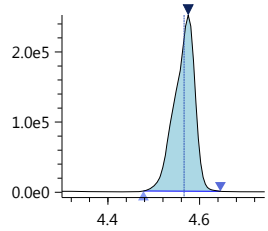

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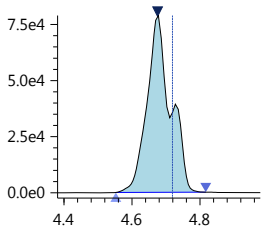
RT 4.675 Area 378974
Q 499.00>80.00 (-) 7.90e4



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Conc 5.0000
RT 4.730 Area 680229
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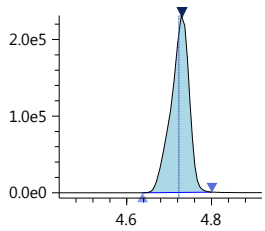

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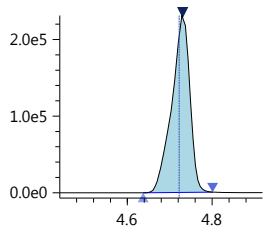

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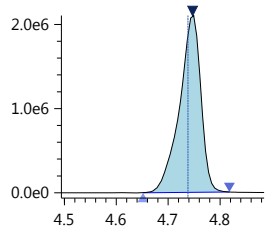
Conc 5.0000
RT 4.747 Area 5994661
ISTD 467.80>423.00 (-) 2.11e6



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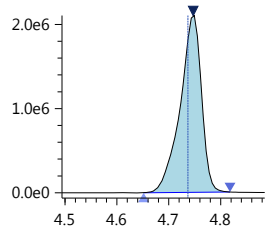

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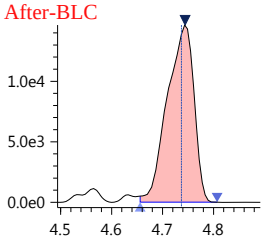
RT 4.744 Area 53239
Q 463.00>418.90 (-) 1.46e4



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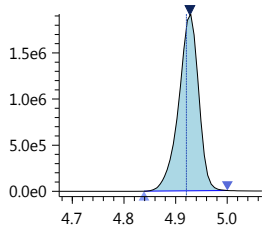

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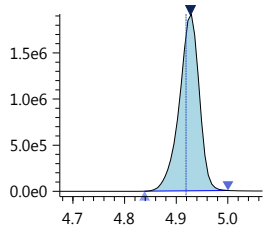

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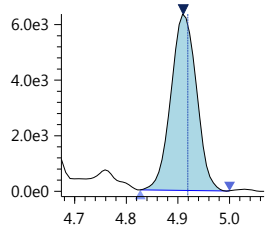
RT 4.911 Area 21962
Q 513.00>468.80 (-) 6.38e3



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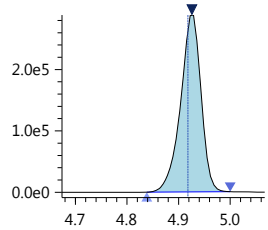
Conc 5.0000
RT 4.926 Area 795538
ISTD 528.80>509.00 (-) 2.89e5



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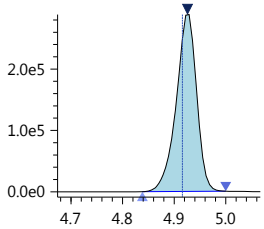
Conc 4.7295
RT 4.926 Area 795538
Q 528.80>509.00 (-) 2.89e5



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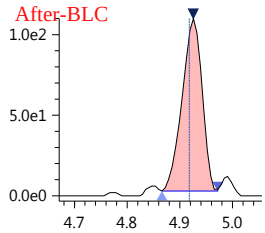

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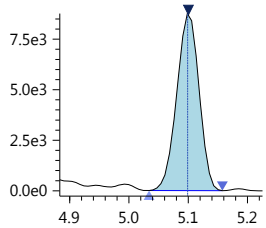

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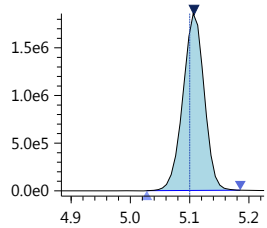

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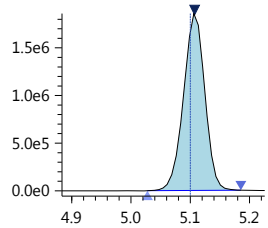
Q 564.80>519.95 (-) 1.86e6



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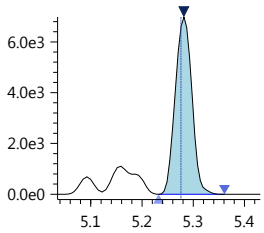

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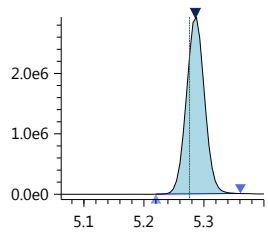
RT 5.286 Area 6195950
Q 614.80>569.95 (-) 2.93e6



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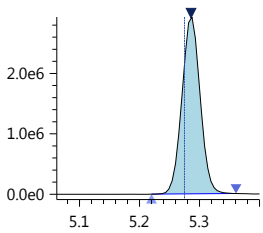

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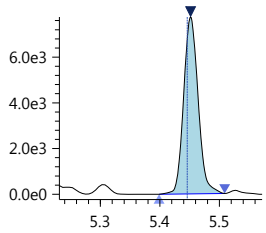

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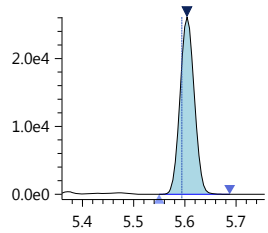
RT 5.604 Area 50835
Q 713.40>669.00 (-) 2.61e4



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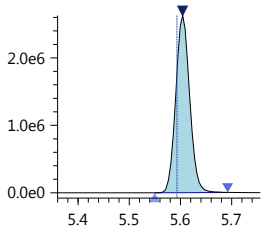

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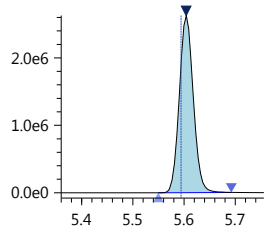

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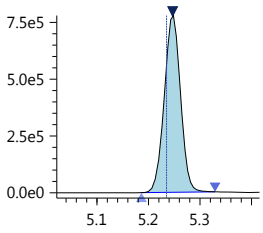

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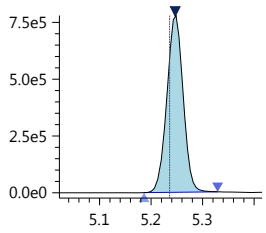

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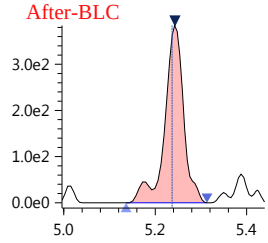

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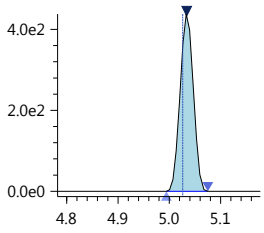

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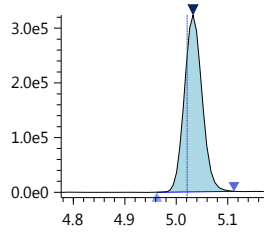
Conc 2.3419
RT 5.032 Area 778903
Q 572.80>419.05 (-) 3.24e5



N-MeFOSAA-d3_IS
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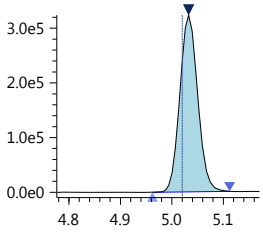
ISTD 572.80>419.05 (-) 3.24e5



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Conc 0.0056
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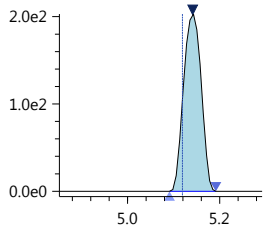
Q 584.20>418.95 (-) 2.03e2



N-EtFOSAA-d5_IS
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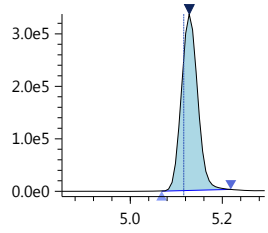
ISTD 588.80>419.00 (-) 3.38e5



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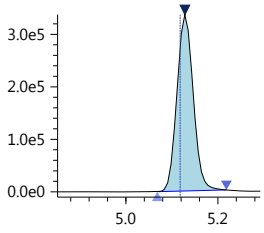

13C7-PFUnDA_IS
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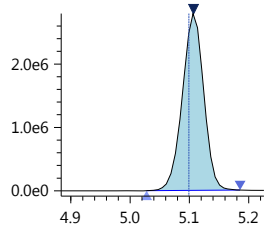

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Printed at 3/21/2019 9:16:10 AM

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Date acquired: 3/19/2019 12:45:04 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_017.lcd
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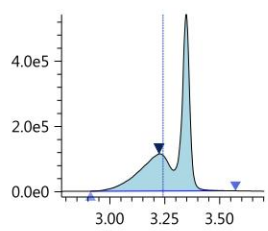
PFBA-13C_IS
Conc 5.0000
RT 3.223 Area 2468076
ISTD 216.90>172.15 (-) 5.43e5



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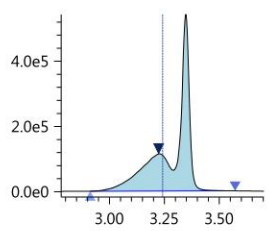

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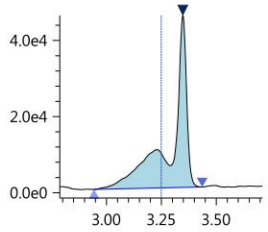

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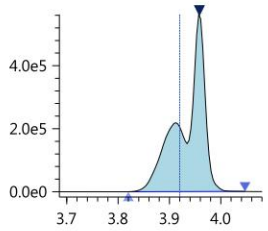
Conc 5.0000
RT 3.958 Area 1624287
ISTD 267.90>223.00 (-) 5.63e5



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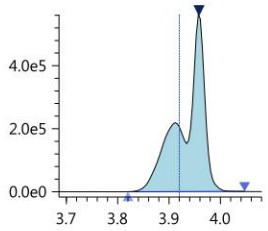

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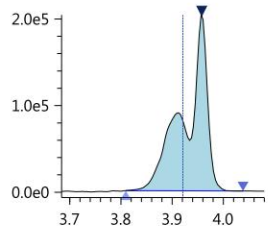

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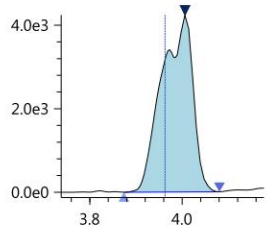

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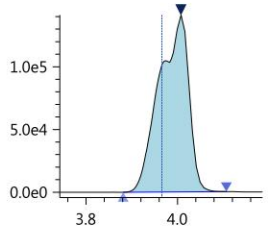

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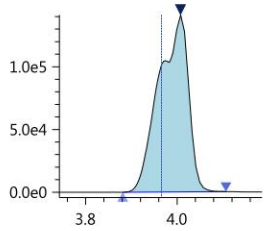

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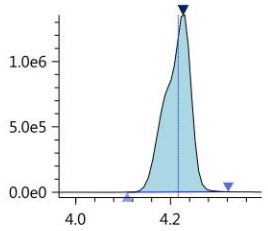

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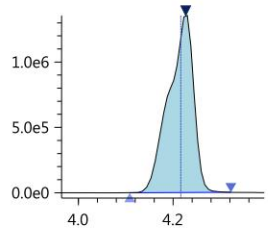

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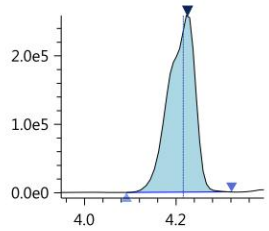
RT 4.225 Area 1050055
Q 313.00>269.00 (-) 2.59e5



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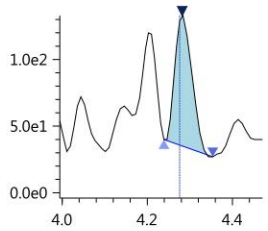
Q 329.00>169.00 (-) 1.33e2



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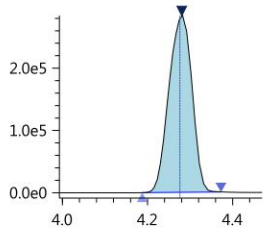
RT 4.281 Area 1072986
ISTD 332.00>286.80 (-) 2.85e5



HFPO_DA-13C
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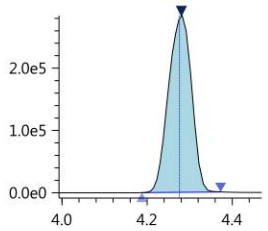

4_2-FTS-13C_IS
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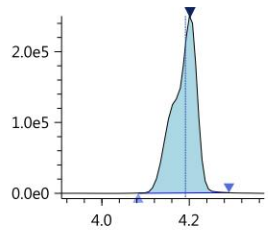
RT 4.202 Area 880018
ISTD 328.80>309.05 (-) 2.50e5



4_2-FTS-13C
Conc 5.3999
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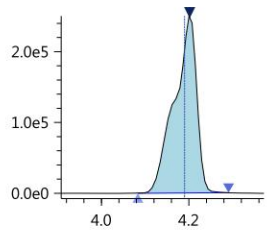

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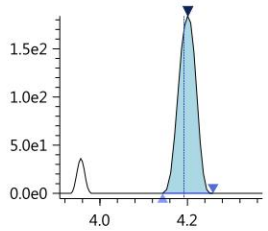

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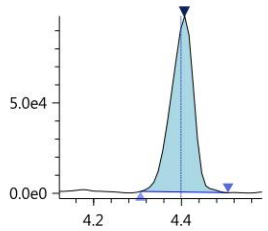
Q 362.90>319.00 (-) 9.81e4



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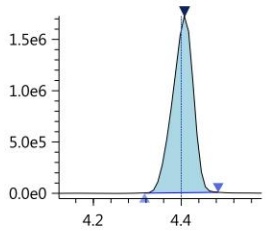

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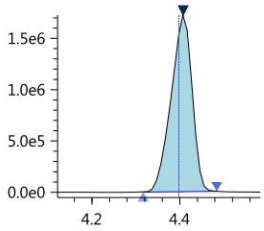
PFHpA-13C
Conc 4.4563
RT 4.408 Area 5721097
Q 366.90>322.10 (-) 1.73e6



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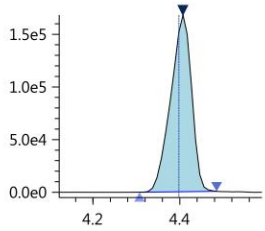
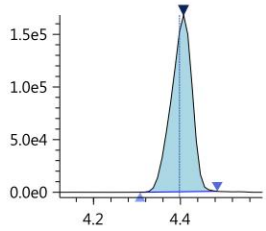
Conc 5.0000
RT 4.407 Area 560747
ISTD 402.70>84.05 (-) 1.68e5



PFHxS-18O
Conc 4.4569
RT 4.407 Area 560747
Q 402.70>84.05 (-) 1.68e5



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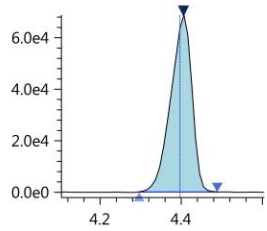
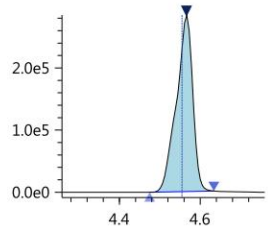
Conc 2.0424
RT 4.406 Area 249243
Q 399.00>80.00 (-) 6.88e4



6_2-FTS-13C
Conc 5.5426
RT 4.566 Area 799085
Q 428.90>409.00 (-) 2.85e5



6_2-FTS-13C_IS
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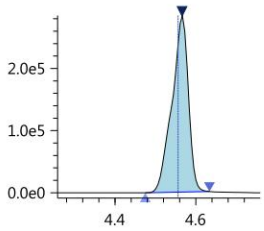
RT 4.566 Area 799085
ISTD 428.90>409.00 (-) 2.85e5



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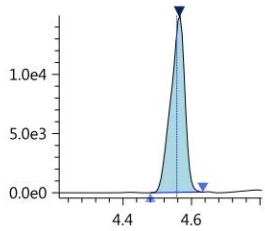
RT 4.565 Area 42813
Q 427.00>407.00 (-) 1.50e4



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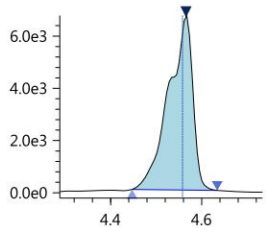
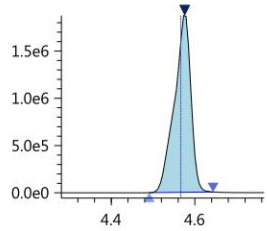
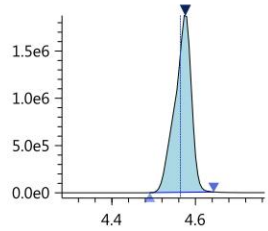
Conc 0.1786
RT 4.566 Area 24623
Q 449.00>80.15 (-) 6.79e3



PFOA-13C_IS
Conc 5.0000
RT 4.576 Area 5164022
ISTD 416.80>372.05 (-) 1.88e6



PFOA-13C
Conc 4.0355
RT 4.576 Area 5164022
Q 416.80>372.05 (-) 1.88e6



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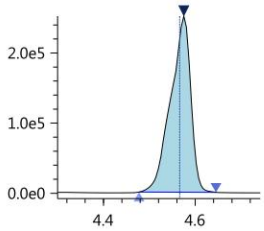
RT 4.575 Area 765221
Q 413.00>369.00 (-) 2.53e5



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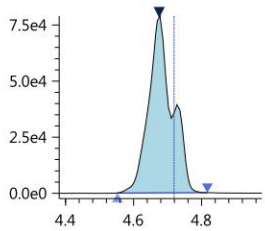
RT 4.675 Area 378974
Q 499.00>80.00 (-) 7.90e4



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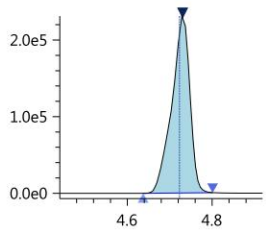
Conc 5.0000
RT 4.730 Area 680229
ISTD 502.80>80.05 (-) 2.31e5



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Conc 4.5570
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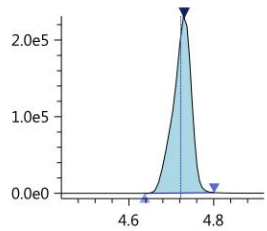
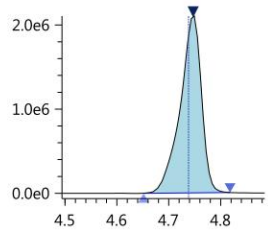
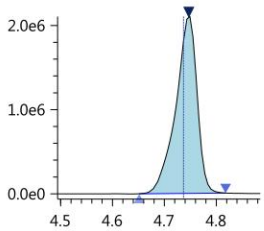
Q 502.80>80.05 (-) 2.31e5



PFNA-13C_IS
Conc 5.0000
RT 4.747 Area 5994661
ISTD 467.80>423.00 (-) 2.11e6



PFNA-13C
Conc 4.1768
RT 4.747 Area 5994661
Q 467.80>423.00 (-) 2.11e6



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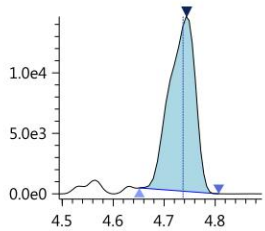
Conc 0.0459
RT 4.744 Area 51219
Q 463.00>418.90 (-) 1.46e4



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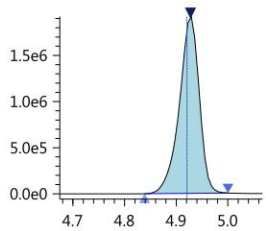
ISTD 514.80>469.95 (-) 1.92e6



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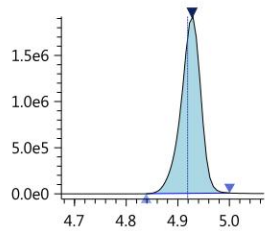
Conc 3.8001
RT 4.928 Area 5145041
Q 514.80>469.95 (-) 1.92e6



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RT 4.911 Area 21962
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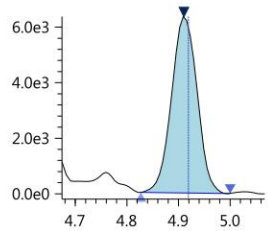

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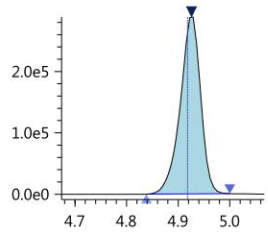
8_2-FTS-13C_IS
Conc 5.0000
RT 4.926 Area 795538
ISTD 528.80>509.00 (-) 2.89e5



8_2-FTS-13C
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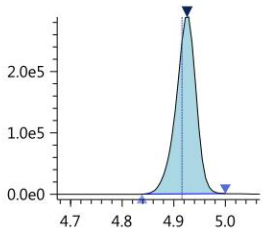
Q 528.80>509.00 (-) 2.89e5



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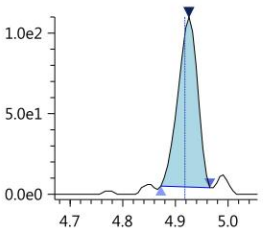
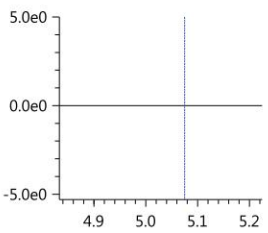
Conc 0.0018
RT 4.925 Area 273
Q 527.10>506.90 (-) 1.10e2



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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Conc -0.0082
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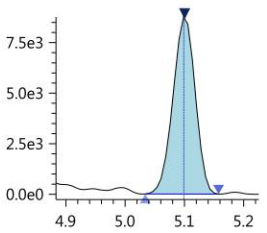
Q 563.00>518.90 (-) 8.77e3



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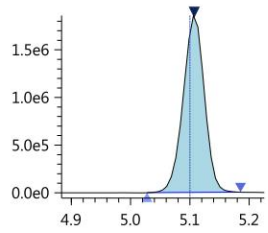
Conc 5.0000
RT 5.107 Area 4646407
ISTD 564.80>519.95 (-) 1.86e6



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Conc 3.8141
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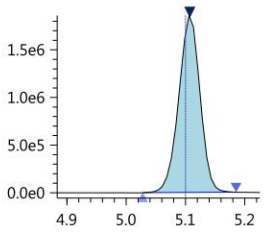
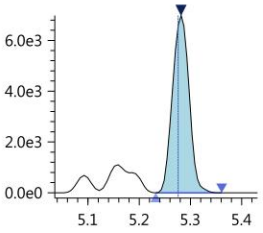
Q 564.80>519.95 (-) 1.86e6



PFDoA
Conc 0.0111
RT 5.282 Area 15803
Q 613.05>569.00 (-) 6.98e3



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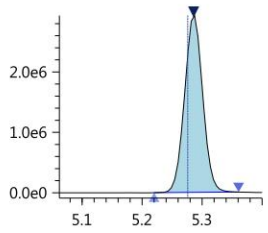
Conc 3.4917
RT 5.286 Area 6195950
Q 614.80>569.95 (-) 2.93e6



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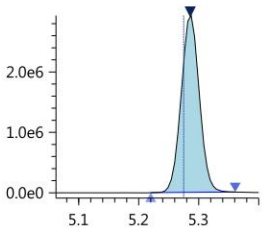
ISTD 614.80>569.95 (-) 2.93e6



10_2-FtS_1
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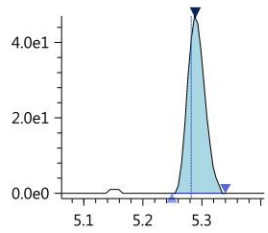
RT 5.289 Area 98
Q 627.00>606.95 (-) 4.70e1



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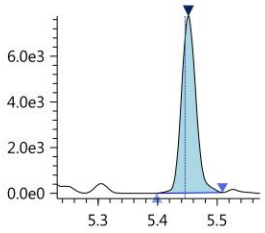
Conc 0.0006
RT 5.452 Area 13145
Q 663.00>618.90 (-) 7.76e3



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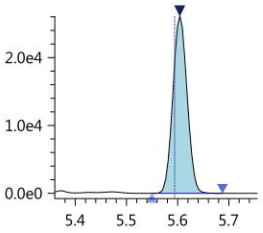
Conc 0.0081
RT 5.604 Area 50835
Q 713.40>669.00 (-) 2.61e4



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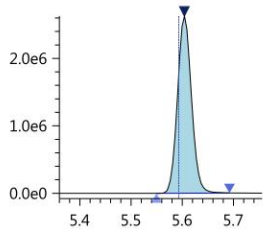
Conc 3.7949
RT 5.604 Area 4985884
Q 714.70>669.90 (-) 2.63e6



PFTeDA-13C_IS
Conc 5.0000
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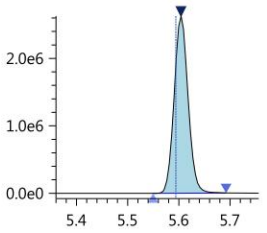
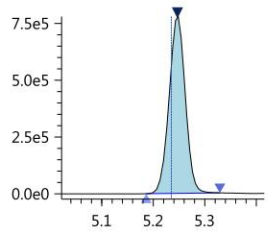
ISTD 714.70>669.90 (-) 2.63e6



FOSA-13C_IS
Conc 5.0000
RT 5.247 Area 1706036
ISTD 506.00>78.05 (-) 7.80e5



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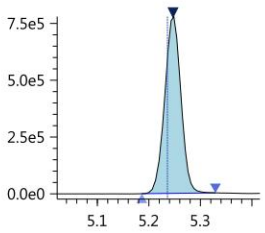
Conc 3.7433
RT 5.247 Area 1706036
Q 506.00>78.05 (-) 7.80e5



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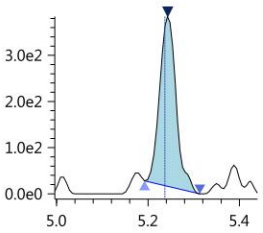
Conc 0.0021
RT 5.243 Area 923
Q 498.20>78.00 (-) 3.84e2



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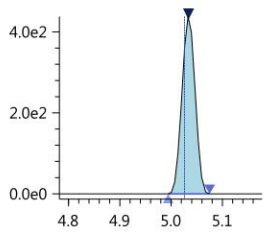
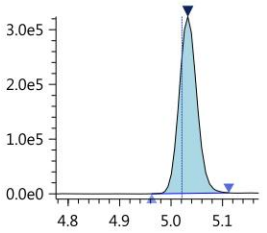
Conc 0.0083
RT 5.034 Area 793
Q 570.20>419.00 (-) 4.38e2



N-MeFOSAA-d3
Conc 2.3419
RT 5.032 Area 778903
Q 572.80>419.05 (-) 3.24e5



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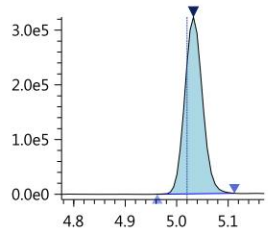
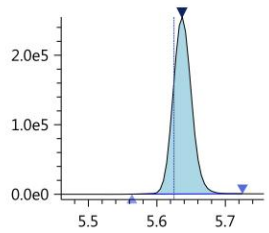
Conc 5.0000
RT 5.032 Area 778903
ISTD 572.80>419.05 (-) 3.24e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.637 Area 484503
ISTD 514.90>168.90 (-) 2.55e5



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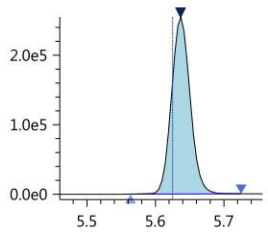
Conc 2.9253
RT 5.637 Area 484503
Q 514.90>168.90 (-) 2.55e5



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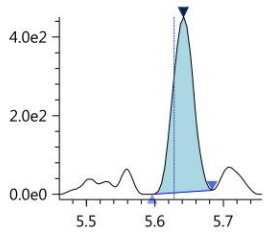
RT 5.642 Area 949
Q 512.00>169.10 (-) 4.51e2



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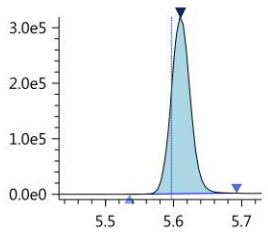
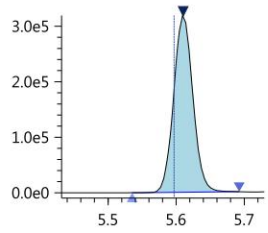
Conc 3.5732
RT 5.610 Area 625837
Q 622.70>59.10 (-) 3.19e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.610 Area 625837
ISTD 622.70>59.10 (-) 3.19e5



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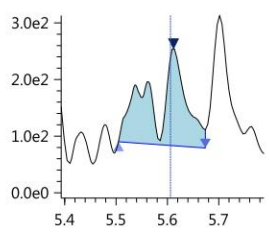
RT 5.612 Area 775
Q 616.00>59.00 (-) 3.13e2



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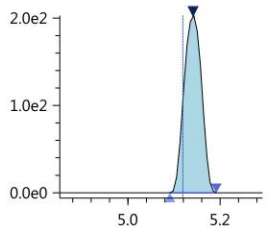
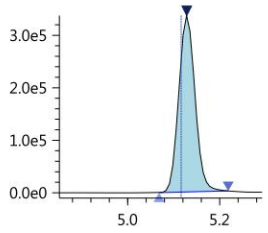
Conc 0.0056
RT 5.141 Area 543
Q 584.20>418.95 (-) 2.03e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.128 Area 826967
ISTD 588.80>419.00 (-) 3.38e5



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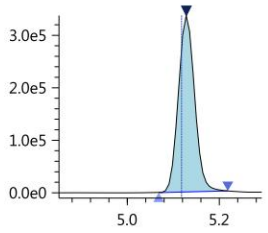
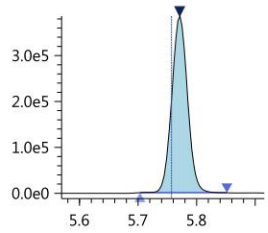
Conc 2.4924
RT 5.128 Area 826967
Q 588.80>419.00 (-) 3.38e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.771 Area 722727
ISTD 530.90>169.15 (-) 3.86e5



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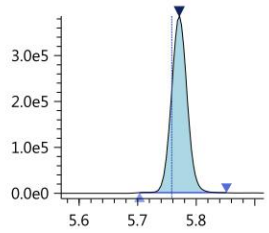
Conc 3.1515
RT 5.771 Area 722727
Q 530.90>169.15 (-) 3.86e5



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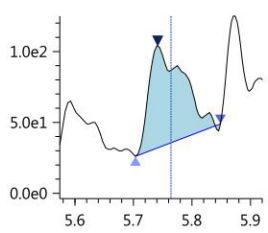
Conc 0.0120
RT 5.741 Area 289
Q 526.90>169.10 (-) 1.25e2



N-EtFOSE-d9_IS
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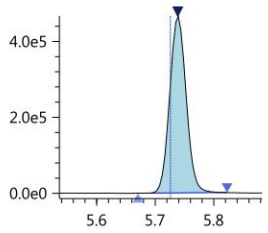
RT 5.738 Area 911987
ISTD 638.70>59.10 (-) 4.67e5



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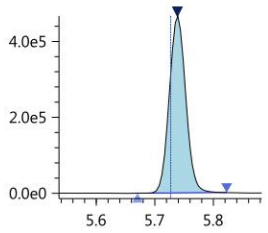
Q 638.70>59.10 (-) 4.67e5



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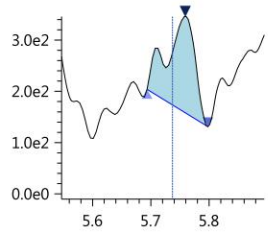
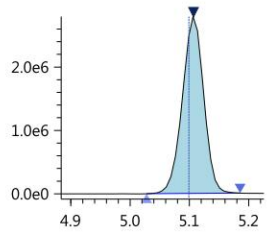
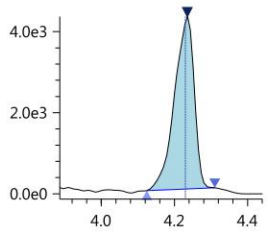
Q 630.00>58.90 (-) 3.46e2



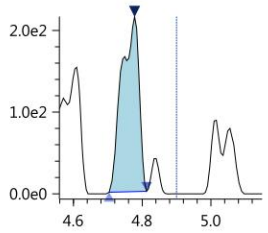
13C7-PFUnDA_IS
Conc 5.0000
RT 5.107 Area 7011971
ISTD 570.00>525.00 (-) 2.80e6



PFPeS
Conc 0.1935
RT 4.235 Area 15897
Q 349.00>99.00 (-) 4.37e3



PFNS
Conc 0.0079
RT 4.778 Area 753
Q 549.00>99.00 (-) 2.17e2



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_018
Lab ID: K1902064-002
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 12:55
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_018	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:55	**Vial:**	4
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-002	**Raw Units:**	ng/mL

Bottle ID:	K1902064-002.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.110	0.00	7373420	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.009	0.00	712560	3.7047	74	20 - 109	Y
18O2-PFHxS	4.406	-0.01	561510	4.2441	85	26 - 122	Y
13C4-PFOS	4.732		654027	4.1667	83	25 - 121	Y
13C4-PFBA	3.350	-0.01	2473861	3.7676	75	27 - 124	Y
13C5-PFPeA	3.960		1700891	3.9961	80	27 - 138	Y
13C2-PFHxA	4.228	0.00	4916643	3.7458	75	28 - 132	Y
13C4-PFHpA	4.407	0.00	5467984	4.0504	81	19 - 139	Y
13C4-PFOA	4.576		5304367	3.9420	79	22 - 130	Y
13C5-PFNA	4.749		6148199	4.0738	81	20 - 127	Y
13C2-PFDA	4.933	+0.00	5144129	3.6132	72	24 - 125	Y
13C2-PFUnDA	5.110	0.00	4402398	3.4366	69	22 - 125	Y
13C2-PFDoDA	5.288		6240478	3.3444	67	19 - 122	Y
13C2-PFTeDA	5.604	+0.00	4872647	3.5269	71	13 - 124	Y
13C8-FOSA	5.249	+0.00	1743761	3.6385	73	18 - 109	Y
D3-MeFOSAA	5.036	0.00	821819	2.3498	47	9 - 123	Y
D5-EtFOSAA	5.131	0.00	990531	2.8390	57	12 - 126	Y
13C2-6:2 FTS	4.568	+0.00	933864	6.1599	123	10 - 226	Y
13C2-8:2 FTS	4.931	+0.00	819546	4.6333	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)	4.006	-0.01	23321	0.1525	4.1	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.400	-0.01	145504	1.1907	32		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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_018	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:55	**Vial:**	4
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-002	**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)	4.567		9544	0.0691	1.8	J	Y
Perfluorooctane sulfonic acid (PFOS)	4.732		424484	4.7641	130		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.349	-0.01	69850	0.1444	3.9	J	Y
Perfluoropentanoic acid (PFPeA)	3.960	0.00	183779	0.1090	2.9	J	Y
Perfluorohexanoic acid (PFHxA)	4.225	0.00	239322	0.2378	6.3	U	Y
Perfluoroheptanoic acid (PFHpA)	4.405	-0.01	141881	0.1252	3.3	J	Y
Perfluorooctanoic acid (PFOA)	4.576		335067	0.3580	9.5		Y
Perfluorononanoic acid (PFNA)	4.735	-0.01	38286	0.0289	0.77	U	Y
Perfluorodecanoic acid (PFDA)	4.907	-0.02	19215	0.0229	0.61	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.096	-0.02	20255	-0.0104	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.277	-0.01	12563	0.0066	0.18	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.445	-0.01	12174	-0.0001	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.603	+0.00	50730	0.0112	0.30	U	Y
Perfluorooctane sulfonamide (FOSA)	5.248	+0.00	1945	0.0042	0.11	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.033	-0.01	298	0.0029	0.077	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.567		33502	0.1697	4.5		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.933	+0.00	146	0.0009	0.024	U	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

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_018

Sample ID: K1902064-002
Date acquired: 3/19/2019 12:55:30 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_018.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.350	2553971	2553971	2	5.0000	ng/mL	----
PFBA-13C	M	3.350	2473861	7373420	26	3.7676	ng/mL	----
PFBA	Auto	3.349	69850	2553971	2	0.1444	ng/mL	----
PFPeA-13C_IS	Auto	3.960	1700891	1700891	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.960	1700891	7373420	26	3.9961	ng/mL	----
PFPeA	Auto	3.960	183779	1700891	4	0.1090	ng/mL	----
PFBS_1	Auto	4.006	23321	712560	16	0.1525	ng/mL	----
PFBS-13C	Auto	4.009	712560	7373420	26	3.7047	ng/mL	----
PFBS-13C_IS	Auto	4.009	712560	712560	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.228	4916643	4916643	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.228	4916643	7373420	26	3.7458	ng/mL	----
PFHxA	Auto	4.225	239322	4916643	6	0.2378	ng/mL	----
PFHpA	Auto	4.405	141881	5467984	8	0.1252	ng/mL	----
PFHpA-13C_IS	Auto	4.407	5467984	5467984	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.407	5467984	7373420	26	4.0504	ng/mL	----
PFHxS-18O_IS	Auto	4.406	561510	561510	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.406	561510	7373420	26	4.2441	ng/mL	----
PFHxS_1	Auto	4.400	145504	561510	7	1.1907	ng/mL	----
6_2-FTS-13C	Auto	4.568	933864	7373420	26	6.1599	ng/mL	----
6_2-FTS-13C_IS	Auto	4.568	933864	933864	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.567	33502	933864	10	0.1697	ng/mL	----
PFHpS_1	M	4.567	9544	561510	7	0.0691	ng/mL	----
PFOA-13C_IS	Auto	4.576	5304367	5304367	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.576	5304367	7373420	26	3.9420	ng/mL	----
PFOA	Auto	4.576	335067	5304367	9	0.3580	ng/mL	----
PFOS_1	Auto	4.732	424484	654027	13	4.7641	ng/mL	----
PFOS-13C_IS	Auto	4.732	654027	654027	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.732	654027	7373420	26	4.1667	ng/mL	----
PFNA-13C_IS	Auto	4.749	6148199	6148199	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.749	6148199	7373420	26	4.0738	ng/mL	----
PFNA	Auto	4.735	38286	6148199	11	0.0289	ng/mL	----
PFDA-13C_IS	Auto	4.933	5144129	5144129	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.933	5144129	7373420	26	3.6132	ng/mL	----
PFDA	M	4.907	19215	5144129	12	0.0229	ng/mL	----
8_2-FTS-13C_IS	Auto	4.931	819546	819546	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.931	819546	7373420	26	4.6333	ng/mL	----
8_2-FTS_1	M	4.933	146	819546	15	0.0009	ng/mL	----
PFUnA	Auto	5.096	20255	4402398	14	-0.0104	ng/mL	----
PFUnA-13C_IS	Auto	5.110	4402398	4402398	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.110	4402398	7373420	26	3.4366	ng/mL	----
PFDoA	Auto	5.277	12563	6240478	17	0.0066	ng/mL	----
PFDoA-13C	Auto	5.288	6240478	7373420	26	3.3444	ng/mL	----
PFDoA-13C_IS	Auto	5.288	6240478	6240478	17	5.0000	ng/mL	----
PFTrDA	Auto	5.445	12174	4872647	22	-0.0001	ng/mL	----
PFTeDA	Auto	5.603	50730	4872647	22	0.0112	ng/mL	----
PFTeDA-13C	Auto	5.604	4872647	7373420	26	3.5269	ng/mL	----
PFTeDA-13C_IS	Auto	5.604	4872647	4872647	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.249	1743761	1743761	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.249	1743761	7373420	26	3.6385	ng/mL	----
FOSA	Auto	5.248	1945	1743761	18	0.0042	ng/mL	----
N-MeFOSAA	Auto	5.033	298	821819	19	0.0029	ng/mL	----
N-MeFOSAA-d3	Auto	5.036	821819	7373420	26	2.3498	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.036	821819	821819	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	990531	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.131	990531	990531	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.131	990531	7373420	26	2.8390	ng/mL	----
13C7-PFUnDA_IS	Auto	5.110	7373420	7373420	26	5.0000	ng/mL	----

Insight Report

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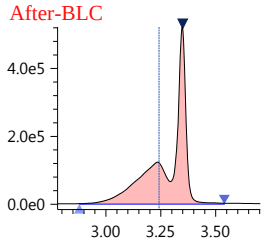
PFBA-13C_IS
Conc 5.0000
RT 3.350 Area 2553971
ISTD 216.90>172.15 (-) 5.22e5



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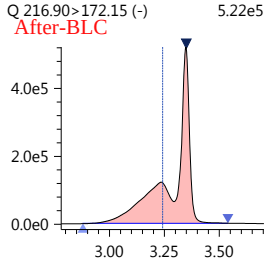
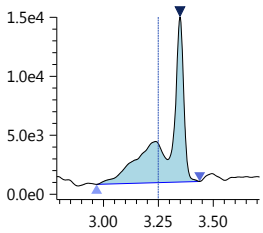
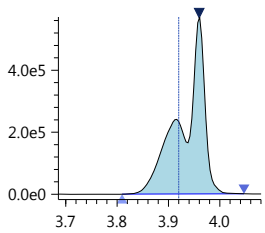
Conc 3.7676
RT 3.350 Area 2473861
Q 216.90>172.15 (-) 5.22e5



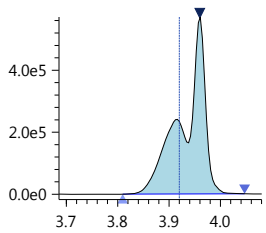
PFBA
Conc 0.1444
RT 3.349 Area 69850
Q 213.00>169.10 (-) 1.50e4



PFPeA-13C_IS
Conc 5.0000
RT 3.960 Area 1700891
ISTD 267.90>223.00 (-) 5.72e5



PFPeA-13C
Conc 3.9961
RT 3.960 Area 1700891
Q 267.90>223.00 (-) 5.72e5



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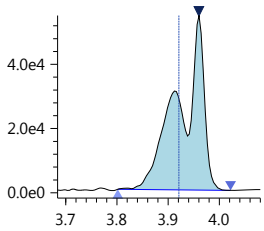
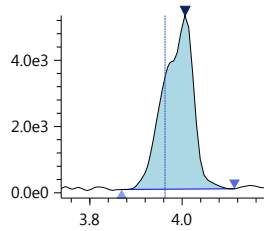
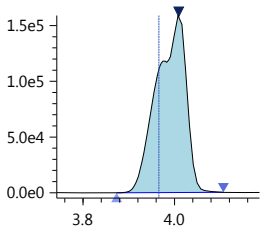
Conc 0.1090
RT 3.960 Area 183779
Q 263.05>219.10 (-) 5.52e4



PFBS_1
Conc 0.1525
RT 4.006 Area 23321
Q 299.00>80.00 (-) 5.35e3



PFBS-13C
Conc 3.7047
RT 4.009 Area 712560
Q 301.80>80.00 (-) 1.59e5



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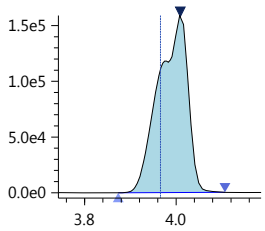
Conc 5.0000
RT 4.009 Area 712560
ISTD 301.80>80.00 (-) 1.59e5



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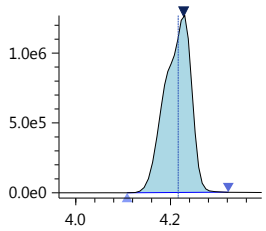
Conc 5.0000
RT 4.228 Area 4916643
ISTD 314.90>270.10 (-) 1.27e6



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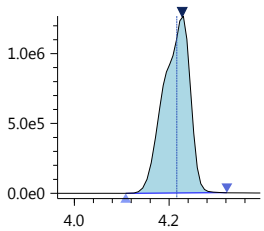
RT 4.228 Area 4916643
Q 314.90>270.10 (-) 1.27e6



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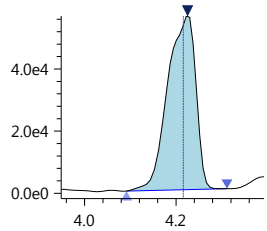
Conc 0.2378
RT 4.225 Area 239322
Q 313.00>269.00 (-) 5.70e4



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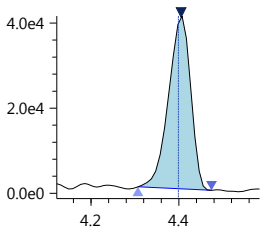
RT 4.405 Area 141881
Q 362.90>319.00 (-) 4.17e4



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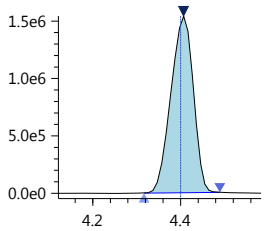
Conc 5.0000
RT 4.407 Area 5467984
ISTD 366.90>322.10 (-) 1.54e6



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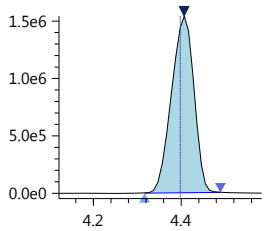
Conc 4.0504
RT 4.407 Area 5467984
Q 366.90>322.10 (-) 1.54e6



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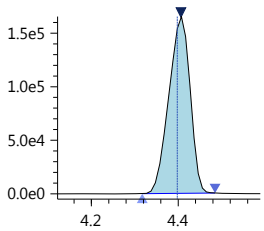
Conc 5.0000
RT 4.406 Area 561510
ISTD 402.70>84.05 (-) 1.66e5



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Conc 4.2441
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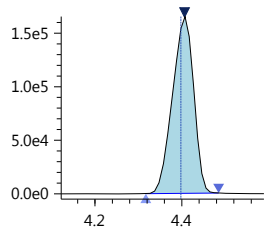
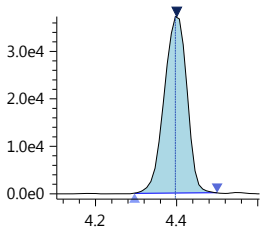
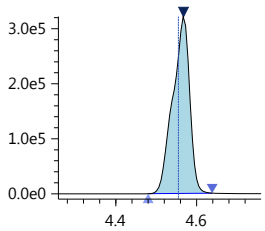
Q 402.70>84.05 (-) 1.66e5



PFHxS_1
Conc 1.1907
RT 4.400 Area 145504
Q 399.00>80.00 (-) 3.73e4



6_2-FTS-13C
Conc 6.1599
RT 4.568 Area 933864
Q 428.90>409.00 (-) 3.22e5



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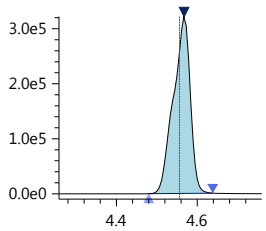
Conc 5.0000
RT 4.568 Area 933864
ISTD 428.90>409.00 (-) 3.22e5



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6_2-FTS_1
Conc 0.1697
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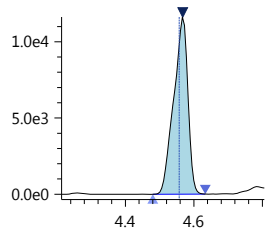
Q 427.00>407.00 (-) 1.16e4



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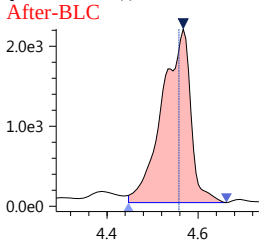
Conc 0.0691
RT 4.567 Area 9544
Q 449.00>80.15 (-) 2.22e3



PFOA-13C_IS
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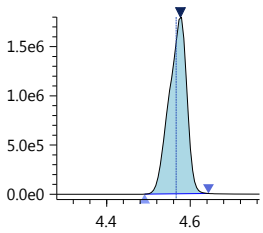
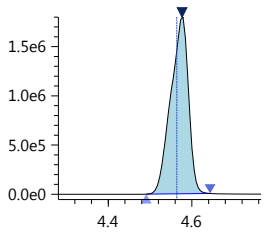
RT 4.576 Area 5304367
ISTD 416.80>372.05 (-) 1.80e6



PFOA-13C
Conc 3.9420
RT 4.576 Area 5304367
Q 416.80>372.05 (-) 1.80e6



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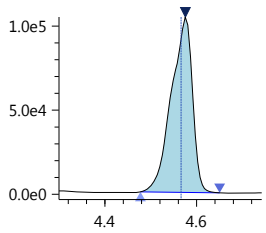
Q 413.00>369.00 (-) 1.05e5



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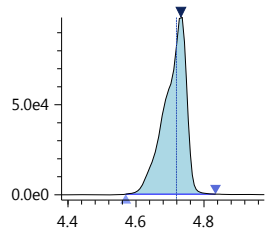
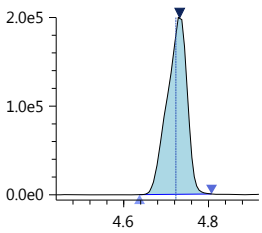
Conc 4.7641
RT 4.732 Area 424484
Q 499.00>80.00 (-) 9.85e4



PFOS-13C_IS
Conc 5.0000
RT 4.732 Area 654027
ISTD 502.80>80.05 (-) 2.00e5



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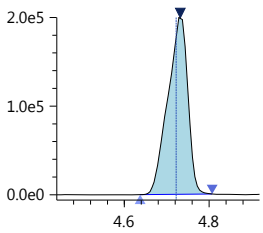

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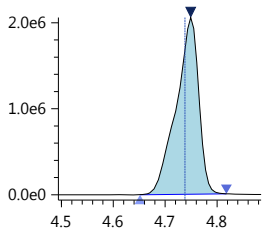
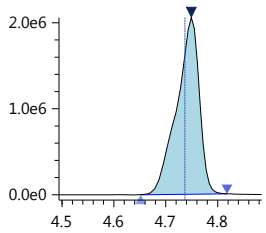
Conc 5.0000
RT 4.749 Area 6148199
ISTD 467.80>423.00 (-) 2.06e6



PFNA-13C
Conc 4.0738
RT 4.749 Area 6148199
Q 467.80>423.00 (-) 2.06e6



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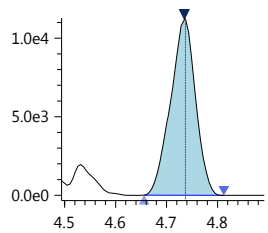
Conc 0.0289
RT 4.735 Area 38286
Q 463.00>418.90 (-) 1.13e4



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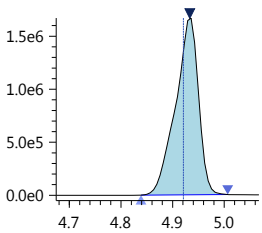
Conc 5.0000
RT 4.933 Area 5144129
ISTD 514.80>469.95 (-) 1.67e6



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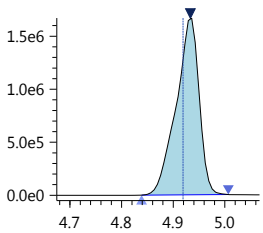
Conc 3.6132
RT 4.933 Area 5144129
Q 514.80>469.95 (-) 1.67e6



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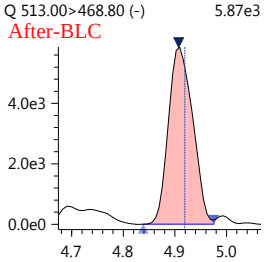
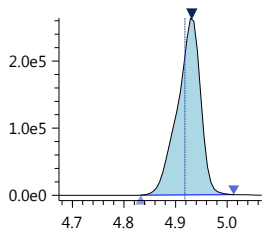
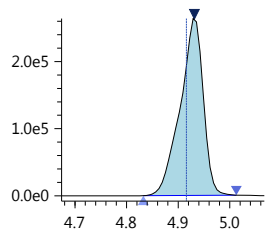
Conc 0.0229
RT 4.907 Area 19215
Q 513.00>468.80 (-) 5.87e3



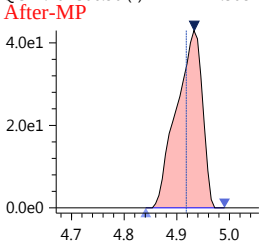
8_2-FTS-13C_IS
Conc 5.0000
RT 4.931 Area 819546
ISTD 528.80>509.00 (-) 2.64e5



8_2-FTS-13C
Conc 4.6333
RT 4.931 Area 819546
Q 528.80>509.00 (-) 2.64e5



8_2-FTS_1
Conc 0.0009
RT 4.933 Area 146
Q 527.10>506.90 (-) 4.30e1



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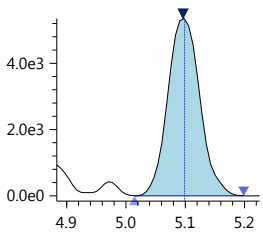
Conc -0.0104
RT 5.096 Area 20255
Q 563.00>518.90 (-) 5.35e3



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Conc 5.0000
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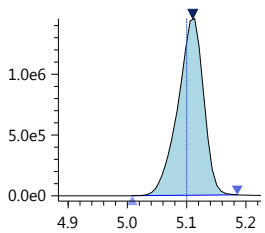
ISTD 564.80>519.95 (-) 1.46e6



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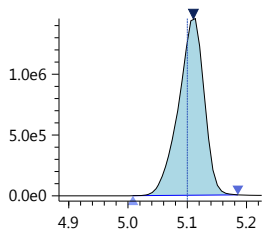
RT 5.110 Area 4402398
Q 564.80>519.95 (-) 1.46e6



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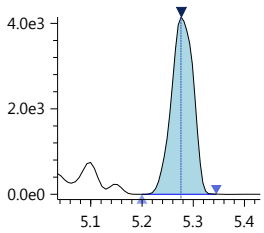
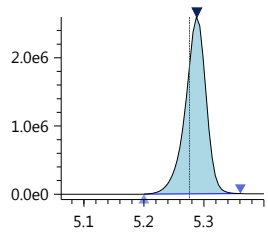
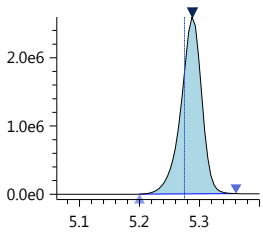
PFDoA
Conc 0.0066
RT 5.277 Area 12563
Q 613.05>569.00 (-) 4.15e3



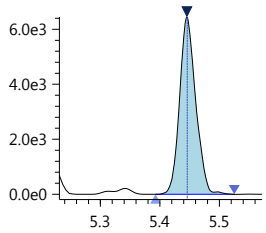
PFDoA-13C
Conc 3.3444
RT 5.288 Area 6240478
Q 614.80>569.95 (-) 2.60e6



PFDoA-13C_IS
Conc 5.0000
RT 5.288 Area 6240478
ISTD 614.80>569.95 (-) 2.60e6



PFTrDA
Conc -0.0001
RT 5.445 Area 12174
Q 663.00>618.90 (-) 6.45e3



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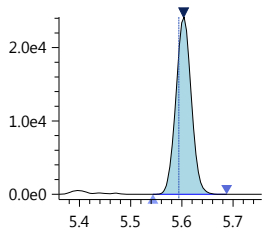
Conc 0.0112
RT 5.603 Area 50730
Q 713.40>669.00 (-) 2.42e4



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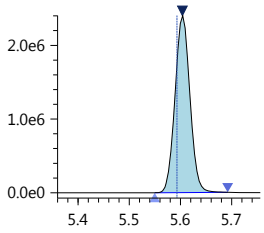
Conc 3.5269
RT 5.604 Area 4872647
Q 714.70>669.90 (-) 2.41e6



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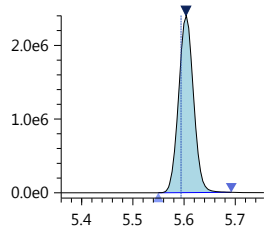
ISTD 714.70>669.90 (-) 2.41e6



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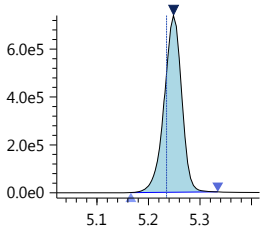
ISTD 506.00>78.05 (-) 7.40e5



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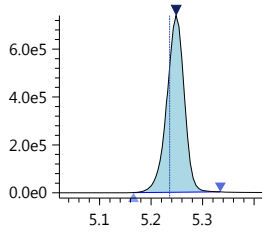
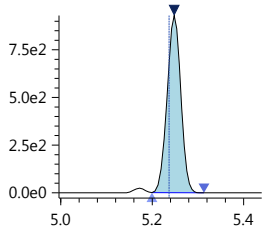
RT 5.249 Area 1743761
Q 506.00>78.05 (-) 7.40e5



FOSA
Conc 0.0042
RT 5.248 Area 1945
Q 498.20>78.00 (-) 9.30e2



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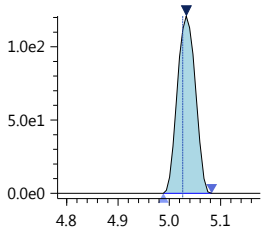
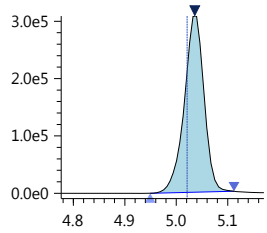
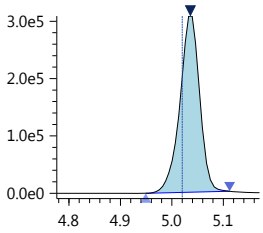
Conc 0.0029
RT 5.033 Area 298
Q 570.20>419.00 (-) 1.21e2



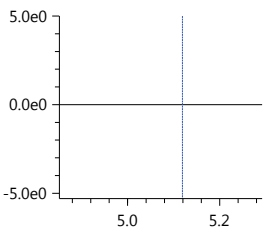
N-MeFOSAA-d3
Conc 2.3498
RT 5.036 Area 821819
Q 572.80>419.05 (-) 3.09e5



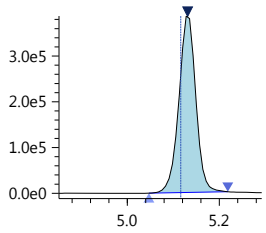
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.036 Area 821819
ISTD 572.80>419.05 (-) 3.09e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.131 Area 990531
ISTD 588.80>419.00 (-) 3.88e5



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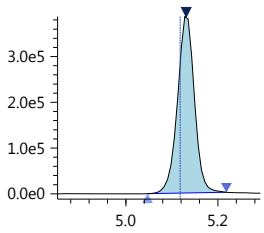
Q 588.80>419.00 (-) 3.88e5



13C7-PFUnDA_IS
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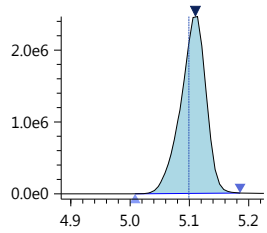
RT 5.110 Area 7373420
ISTD 570.00>525.00 (-) 2.47e6



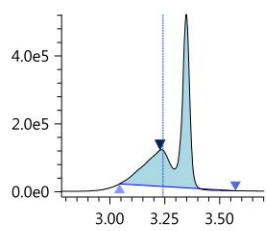
Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_018

Sample ID: K1902064-002
Date acquired: 3/19/2019 12:55:30 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_018.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 2

PFBA-13C_IS
Conc 5.0000
RT 3.228 Area 2091083
ISTD 216.90>172.15 (-) 5.22e5



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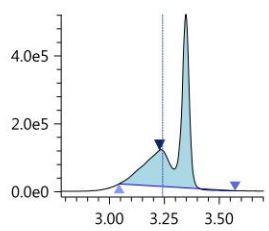
Q 216.90>172.15 (-) 5.22e5



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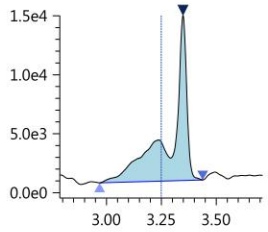
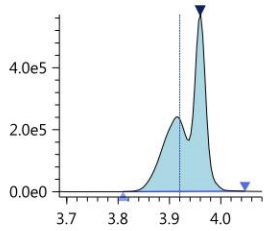
RT 3.349 Area 69850
Q 213.00>169.10 (-) 1.50e4



PFPeA-13C_IS
Conc 5.0000
RT 3.960 Area 1700891
ISTD 267.90>223.00 (-) 5.72e5



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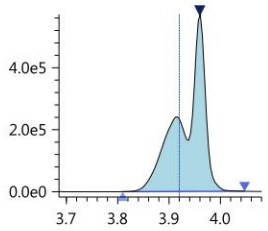

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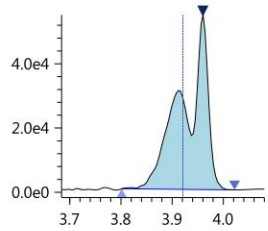
Q 263.05>219.10 (-) 5.52e4



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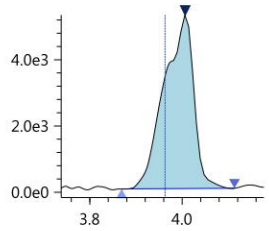
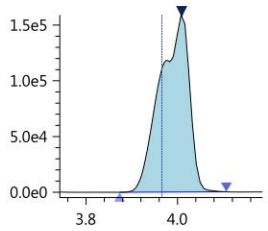
Conc 0.1525
RT 4.006 Area 23321
Q 299.00>80.00 (-) 5.35e3



PFBS-13C
Conc 3.7047
RT 4.009 Area 712560
Q 301.80>80.00 (-) 1.59e5



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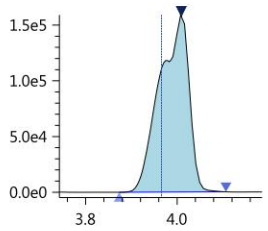
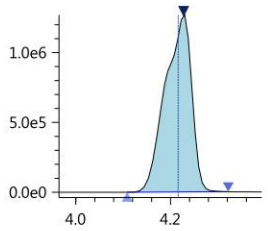


PFHxA-13C_IS
Conc 5.0000
RT 4.228 Area 4916643
ISTD 314.90>270.10 (-) 1.27e6



PFHxA-13C
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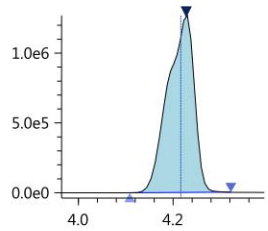
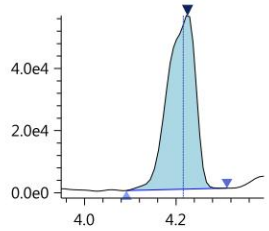
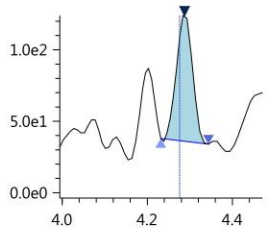


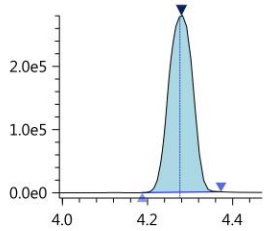
PFHxA
Conc 0.2378
RT 4.225 Area 239322
Q 313.00>269.00 (-) 5.70e4



HPFO_DA
Conc 0.0010
RT 4.288 Area 233
Q 329.00>169.00 (-) 1.24e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.280 Area 1119951
ISTD 332.00>286.80 (-) 2.80e5



HFPO_DA-13C
Conc 3.9295
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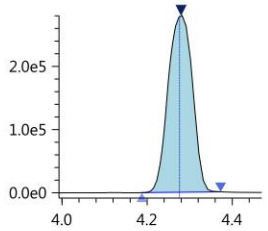
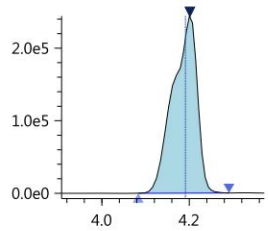
Q 332.00>286.80 (-) 2.80e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.202 Area 943034
ISTD 328.80>309.05 (-) 2.44e5



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Conc 5.5029
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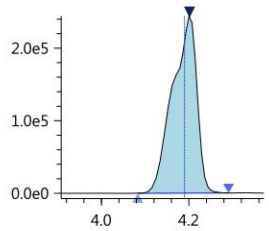
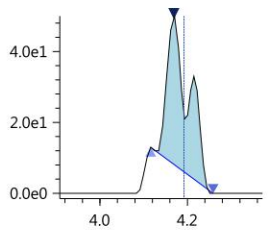
Q 328.80>309.05 (-) 2.44e5



4_2-FTS_1
Conc 0.0007
RT 4.169 Area 143
Q 327.00>307.05 (-) 5.00e1



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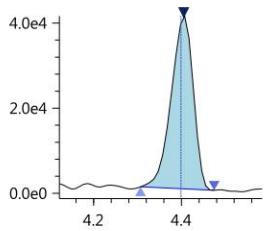
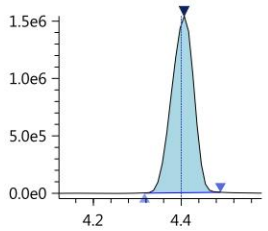
Conc 0.1252
RT 4.405 Area 141881
Q 362.90>319.00 (-) 4.17e4



PFHpA-13C_IS
Conc 5.0000
RT 4.407 Area 5467984
ISTD 366.90>322.10 (-) 1.54e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

PFHpA-13C
Conc 4.0504
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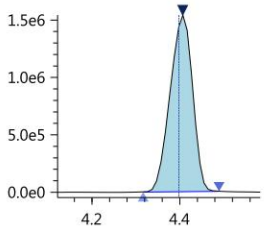
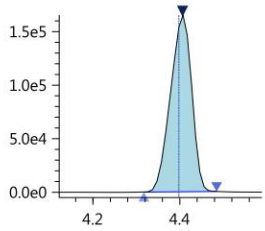
Q 366.90>322.10 (-) 1.54e6



PFHxS-18O_IS
Conc 5.0000
RT 4.406 Area 561510
ISTD 402.70>84.05 (-) 1.66e5



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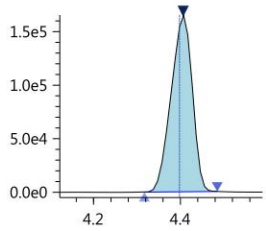
Q 402.70>84.05 (-) 1.66e5



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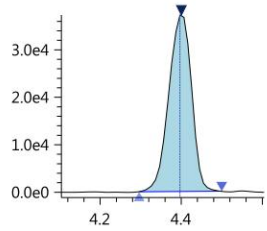
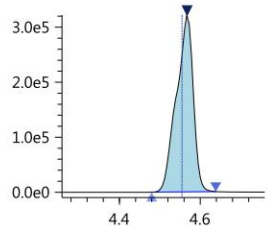
Conc 1.1907
RT 4.400 Area 145504
Q 399.00>80.00 (-) 3.73e4



6_2-FTS-13C
Conc 6.1599
RT 4.568 Area 933864
Q 428.90>409.00 (-) 3.22e5



6_2-FTS-13C_IS
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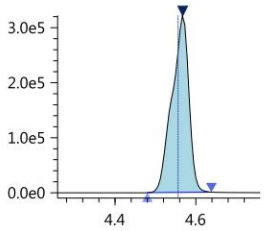
ISTD 428.90>409.00 (-) 3.22e5



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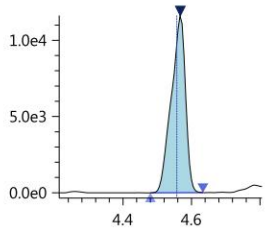
Conc 0.1697
RT 4.567 Area 33502
Q 427.00>407.00 (-) 1.16e4



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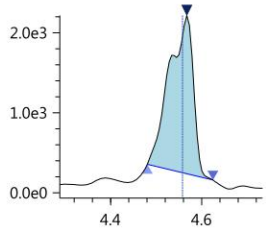
Conc 0.0526
RT 4.567 Area 7258
Q 449.00>80.15 (-) 2.22e3



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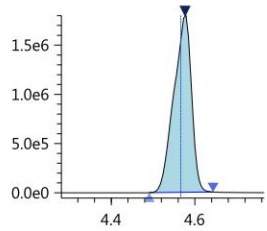
Conc 5.0000
RT 4.576 Area 5304367
ISTD 416.80>372.05 (-) 1.80e6



PFOA-13C
Conc 3.9420
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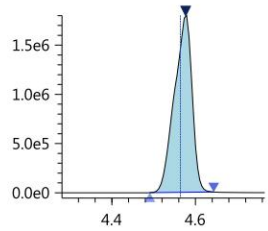
Q 416.80>372.05 (-) 1.80e6



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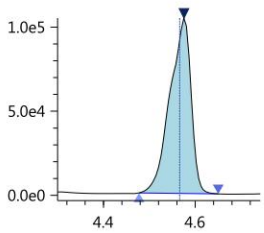
Q 413.00>369.00 (-) 1.05e5



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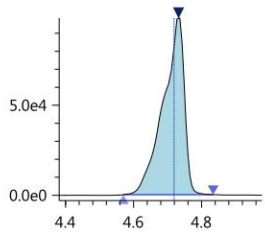
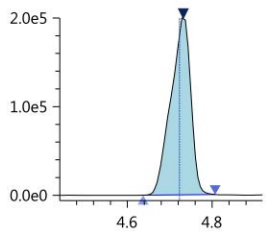
RT 4.732 Area 424484
Q 499.00>80.00 (-) 9.85e4



PFOS-13C_IS
Conc 5.0000
RT 4.732 Area 654027
ISTD 502.80>80.05 (-) 2.00e5



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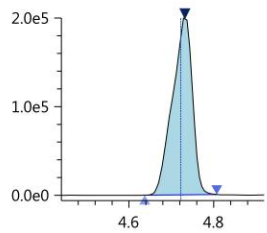

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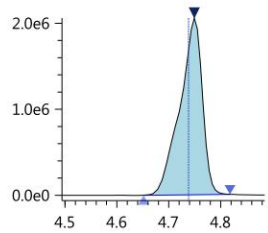
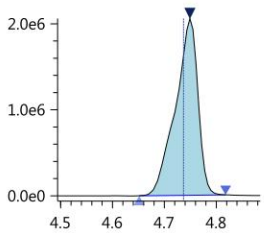
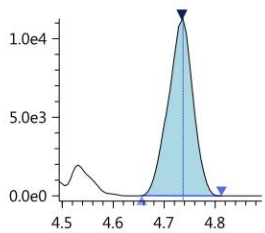
Conc 5.0000
RT 4.749 Area 6148199
ISTD 467.80>423.00 (-) 2.06e6



PFNA-13C
Conc 4.0738
RT 4.749 Area 6148199
Q 467.80>423.00 (-) 2.06e6



PFNA
Conc 0.0289
RT 4.735 Area 38286
Q 463.00>418.90 (-) 1.13e4



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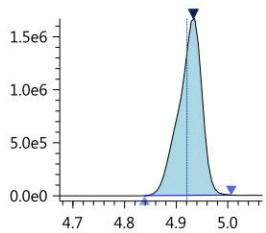
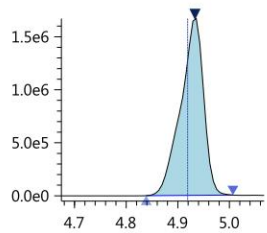
RT 4.933 Area 5144129
ISTD 514.80>469.95 (-) 1.67e6



PFDA-13C
Conc 3.6132
RT 4.933 Area 5144129
Q 514.80>469.95 (-) 1.67e6



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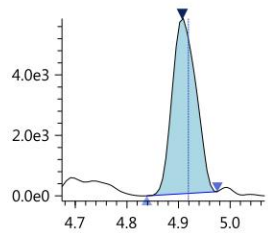
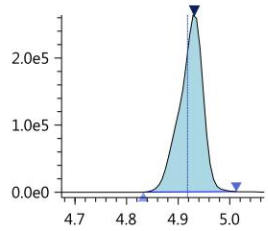
RT 4.907 Area 18694
Q 513.00>468.80 (-) 5.87e3



Insight Report

Printed at 3/21/2019 9:16:10 AM

8_2-FTS-13C_IS
Conc 5.0000
RT 4.931 Area 819546
ISTD 528.80>509.00 (-) 2.64e5



8_2-FTS-13C
Conc 4.6333
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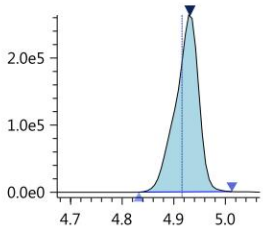
Q 528.80>509.00 (-) 2.64e5



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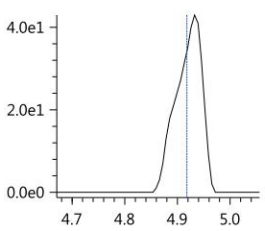
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 4.30e1



PFDS_1
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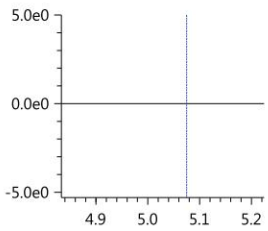
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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Conc -0.0104
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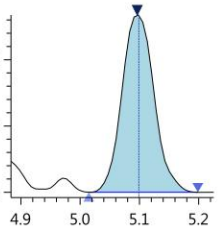
Q 563.00>518.90 (-) 5.35e3



PFUnA-13C_IS
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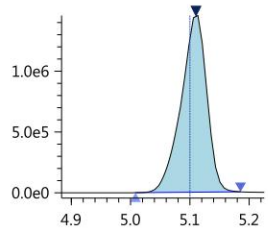
ISTD 564.80>519.95 (-) 1.46e6



PFUnA-13C
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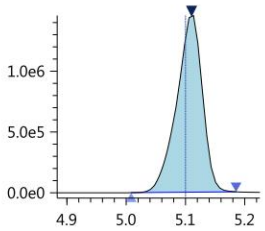
Q 564.80>519.95 (-) 1.46e6



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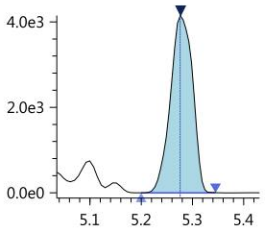
Conc 0.0066
RT 5.277 Area 12563
Q 613.05>569.00 (-) 4.15e3



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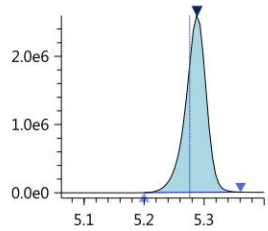
Conc 3.3444
RT 5.288 Area 6240478
Q 614.80>569.95 (-) 2.60e6



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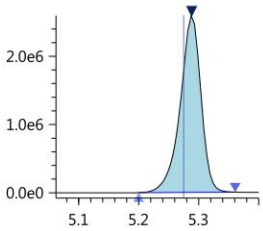

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Conc 0.0009
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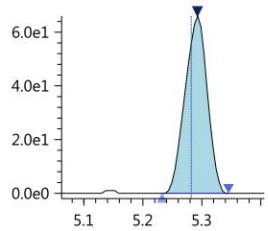
Q 627.00>606.95 (-) 6.60e1



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Conc -0.0001
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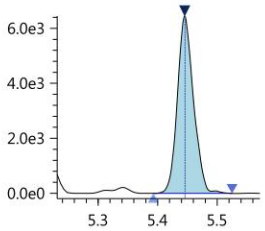
Q 663.00>618.90 (-) 6.45e3



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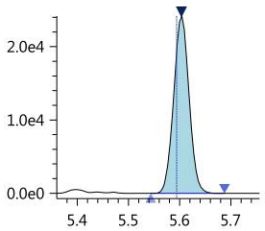
Conc 0.0112
RT 5.603 Area 50730
Q 713.40>669.00 (-) 2.42e4



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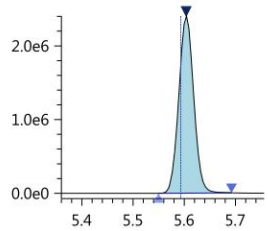
Conc 3.5269
RT 5.604 Area 4872647
Q 714.70>669.90 (-) 2.41e6



PFTeDA-13C_IS
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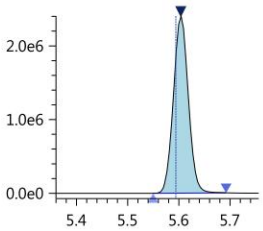
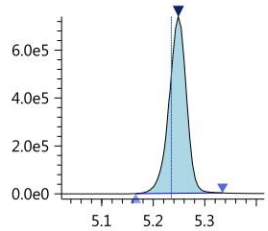
ISTD 714.70>669.90 (-) 2.41e6



FOSA-13C_IS
Conc 5.0000
RT 5.249 Area 1743761
ISTD 506.00>78.05 (-) 7.40e5



FOSA-13C
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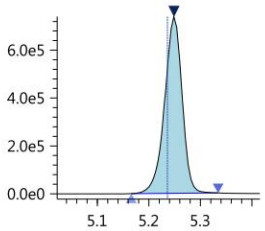
Q 506.00>78.05 (-) 7.40e5



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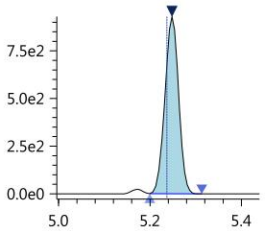
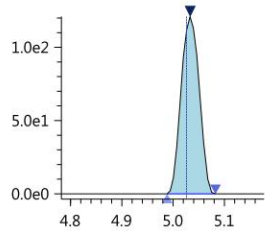
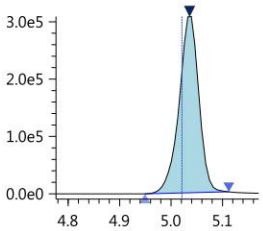
Q 498.20>78.00 (-) 9.30e2



N-MeFOSAA
Conc 0.0029
RT 5.033 Area 298
Q 570.20>419.00 (-) 1.21e2



N-MeFOSAA-d3
Conc 2.3498
RT 5.036 Area 821819
Q 572.80>419.05 (-) 3.09e5



Insight Report

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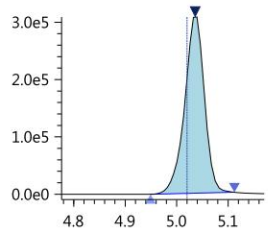
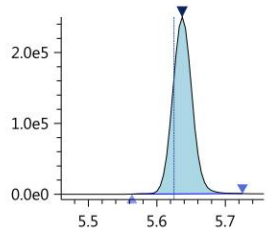
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.036 Area 821819
ISTD 572.80>419.05 (-) 3.09e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.637 Area 500562
ISTD 514.90>168.90 (-) 2.50e5



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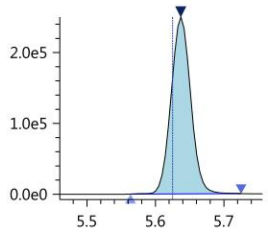
RT 5.637 Area 500562
Q 514.90>168.90 (-) 2.50e5



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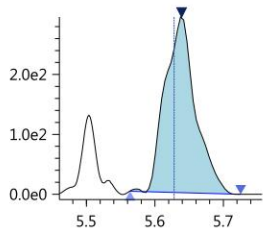
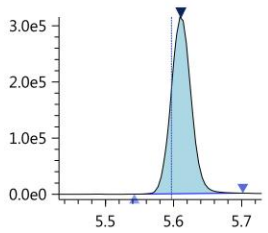
RT 5.639 Area 905
Q 512.00>169.10 (-) 2.96e2



N-MeFOSE-d7
Conc 3.5495
RT 5.611 Area 653729
Q 622.70>59.10 (-) 3.16e5



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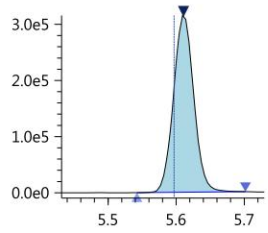
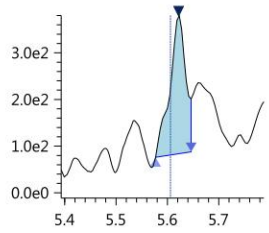
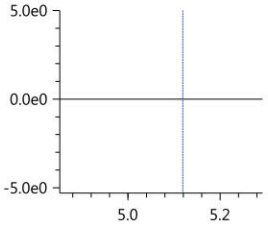
RT 5.611 Area 653729
ISTD 622.70>59.10 (-) 3.16e5



N-MeFOSE
Conc 0.0038
RT 5.622 Area 634
Q 616.00>59.00 (-) 3.80e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
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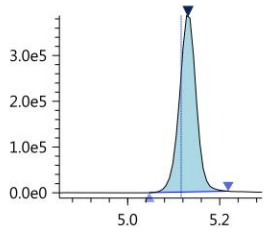

N-EtFOSAA-d5
Conc 2.8390
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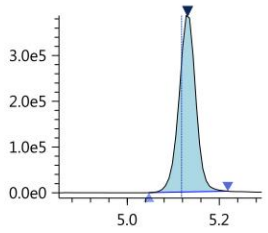

N-EtFOSA-d9_IS
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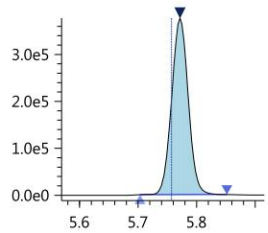

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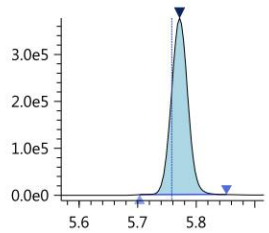

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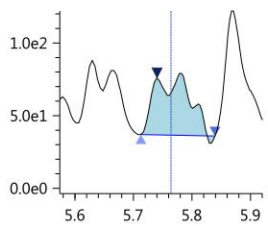
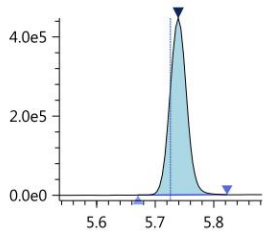
Q 526.90>169.10 (-) 1.22e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.739 Area 898350
ISTD 638.70>59.10 (-) 4.48e5



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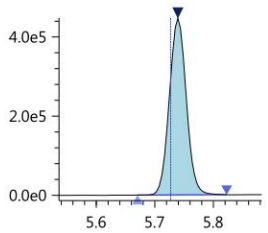
Q 638.70>59.10 (-) 4.48e5



N-EtFOSE
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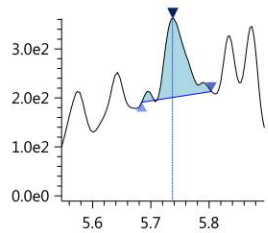
RT 5.738 Area 410
Q 630.00>58.90 (-) 3.62e2



13C7-PFUnDA_IS
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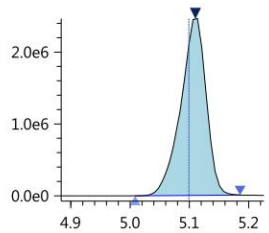
RT 5.110 Area 7373420
ISTD 570.00>525.00 (-) 2.47e6



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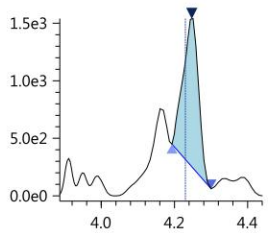
RT 4.247 Area 3773
Q 349.00>99.00 (-) 1.54e3



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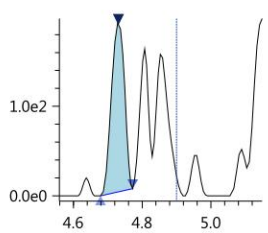
Conc 0.0055
RT 4.731 Area 502
Q 549.00>99.00 (-) 1.98e2



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_019
Lab ID: K1902064-003
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 13:05
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_019	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:05	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-003	**Raw Units:**	ng/mL

Bottle ID:	K1902064-003.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.110	0.00	7575659	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.008	0.00	654985	3.3145	66	20 - 109	Y
18O2-PFHxS	4.406	-0.01	557743	4.1031	82	26 - 122	Y
13C4-PFOS	4.731	0.00	634613	3.9350	79	25 - 121	Y
13C4-PFBA	3.226	-0.13	2300435	3.4099	68	27 - 124	Y
13C5-PFPeA	3.959	0.00	1688864	3.8619	77	27 - 138	Y
13C2-PFHxA	4.226	0.00	4853540	3.5990	72	28 - 132	Y
13C4-PFHpA	4.406	-0.01	5878011	4.2379	85	19 - 139	Y
13C4-PFOA	4.575	0.00	5190951	3.7547	75	22 - 130	Y
13C5-PFNA	4.748	0.00	5781827	3.7288	75	20 - 127	Y
13C2-PFDA	4.929	0.00	5087646	3.4781	70	24 - 125	Y
13C2-PFUnDA	5.110	0.00	4242947	3.2237	64	22 - 125	Y
13C2-PFDoDA	5.288		5716121	2.9816	60	19 - 122	Y
13C2-PFTeDA	5.602		4825965	3.3999	68	13 - 124	Y
13C8-FOSA	5.250	+0.00	1608759	3.2672	65	18 - 109	Y
D3-MeFOSAA	5.033	-0.01	815846	2.2705	45	9 - 123	Y
D5-EtFOSAA	5.131	0.00	940510	2.6237	52	12 - 126	Y
13C2-6:2 FTS	4.566	0.00	821558	5.2744	105	10 - 226	Y
13C2-8:2 FTS	4.927	0.00	791606	4.3559	87	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)	3.969	-0.04	246	0.0018	0.049	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.395	-0.02	1286	0.0106	0.29	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

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1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_019	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:05	**Vial:**	5
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-003	**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)	4.730	0.00	41	0.0005	0.014	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.958	0.00	92216	-0.0076	0	U	Y
Perfluorohexanoic acid (PFHxA)	4.202	-0.03	30285	-0.0002	0	U	Y
Perfluoroheptanoic acid (PFHpA)	4.388	-0.02	27655	-0.0100	0	U	Y
Perfluorooctanoic acid (PFOA)	4.553	-0.02	25727	0.0048	0.13	U	Y
Perfluorononanoic acid (PFNA)	4.725	-0.03	14858	0.0020	0.054	U	Y
Perfluorodecanoic acid (PFDA)	4.899	-0.03	15955	0.0192	0.52	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.097	-0.02	24762	-0.0024	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.276	-0.01	11824	0.0071	0.19	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.444	-0.01	11476	-0.0008	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.603	+0.00	45747	-0.0023	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.252	+0.01	1731	0.0041	0.11	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.030	-0.01	588	0.0058	0.16	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.546	-0.02	420	0.0024	0.065	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0		0	0	0	U	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

Printed at 3/21/2019 9:48:23 AM

190319_019

Sample ID: K1902064-003
Date acquired: 3/19/2019 1:05:57 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_019.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.226	2300435	2300435	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.226	2300435	7575659	26	3.4099	ng/mL	----
PFBA	ND(W/B)	----	----	2300435	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.959	1688864	1688864	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.959	1688864	7575659	26	3.8619	ng/mL	----
PFPeA	Auto	3.958	92216	1688864	4	-0.0076	ng/mL	----
PFBS_1	Auto	3.969	246	654985	16	0.0018	ng/mL	----
PFBS-13C	Auto	4.008	654985	7575659	26	3.3145	ng/mL	----
PFBS-13C_IS	Auto	4.008	654985	654985	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.226	4853540	4853540	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.226	4853540	7575659	26	3.5990	ng/mL	----
PFHxA	Auto	4.202	30285	4853540	6	-0.0002	ng/mL	----
PFHpA	Auto	4.388	27655	5878011	8	-0.0100	ng/mL	----
PFHpA-13C_IS	Auto	4.406	5878011	5878011	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.406	5878011	7575659	26	4.2379	ng/mL	----
PFHxS-18O_IS	Auto	4.406	557743	557743	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.406	557743	7575659	26	4.1031	ng/mL	----
PFHxS_1	Auto	4.395	1286	557743	7	0.0106	ng/mL	----
6_2-FTS-13C	Auto	4.566	821558	7575659	26	5.2744	ng/mL	----
6_2-FTS-13C_IS	Auto	4.566	821558	821558	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.546	420	821558	10	0.0024	ng/mL	----
PFHpS_1	ND(W/B)	----	----	557743	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.575	5190951	5190951	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.575	5190951	7575659	26	3.7547	ng/mL	----
PFOA	Auto	4.553	25727	5190951	9	0.0048	ng/mL	----
PFOS_1	M	4.730	41	634613	13	0.0005	ng/mL	----
PFOS-13C_IS	Auto	4.731	634613	634613	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.731	634613	7575659	26	3.9350	ng/mL	----
PFNA-13C_IS	Auto	4.748	5781827	5781827	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.748	5781827	7575659	26	3.7288	ng/mL	----
PFNA	Auto	4.725	14858	5781827	11	0.0020	ng/mL	----
PFDA-13C_IS	Auto	4.929	5087646	5087646	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.929	5087646	7575659	26	3.4781	ng/mL	----
PFDA	Auto	4.899	15955	5087646	12	0.0192	ng/mL	----
8_2-FTS-13C_IS	Auto	4.927	791606	791606	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.927	791606	7575659	26	4.3559	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	791606	15	----	ng/mL	----
PFUnA	M	5.097	24762	4242947	14	-0.0024	ng/mL	----
PFUnA-13C_IS	Auto	5.110	4242947	4242947	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.110	4242947	7575659	26	3.2237	ng/mL	----
PFDoA	Auto	5.276	11824	5716121	17	0.0071	ng/mL	----
PFDoA-13C	Auto	5.288	5716121	7575659	26	2.9816	ng/mL	----
PFDoA-13C_IS	Auto	5.288	5716121	5716121	17	5.0000	ng/mL	----
PFTrDA	Auto	5.444	11476	4825965	22	-0.0008	ng/mL	----
PFTeDA	Auto	5.603	45747	4825965	22	-0.0023	ng/mL	----
PFTeDA-13C	Auto	5.602	4825965	7575659	26	3.3999	ng/mL	----
PFTeDA-13C_IS	Auto	5.602	4825965	4825965	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.250	1608759	1608759	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.250	1608759	7575659	26	3.2672	ng/mL	----
FOSA	Auto	5.252	1731	1608759	18	0.0041	ng/mL	----
N-MeFOSAA	Auto	5.030	588	815846	19	0.0058	ng/mL	----
N-MeFOSAA-d3	Auto	5.033	815846	7575659	26	2.2705	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.033	815846	815846	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	940510	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.131	940510	940510	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.131	940510	7575659	26	2.6237	ng/mL	----
13C7-PFUnDA_IS	Auto	5.110	7575659	7575659	26	5.0000	ng/mL	----

Insight Report

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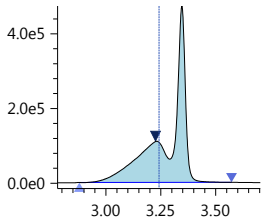
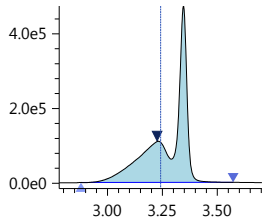
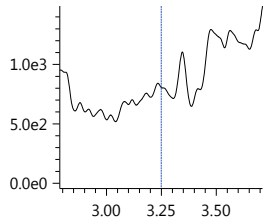
PFBA-13C_IS
Conc 5.0000
RT 3.226 Area 2300435
ISTD 216.90>172.15 (-) 4.74e5



PFBA-13C
Conc 3.4099
RT 3.226 Area 2300435
Q 216.90>172.15 (-) 4.74e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.49e3



PFPeA-13C_IS
Conc 5.0000
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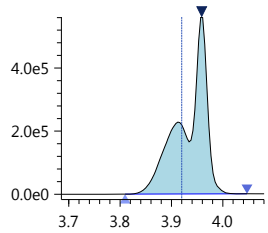
ISTD 267.90>223.00 (-) 5.62e5



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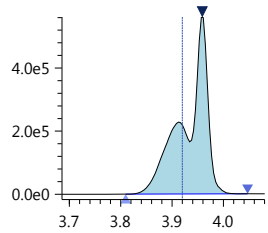
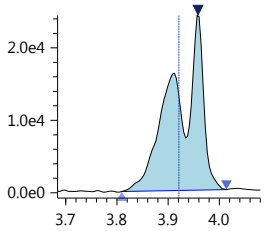
Q 267.90>223.00 (-) 5.62e5



PFPeA
Conc -0.0076
RT 3.958 Area 92216
Q 263.05>219.10 (-) 2.45e4



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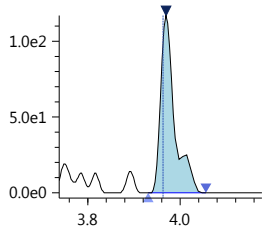
Conc 0.0018
RT 3.969 Area 246
Q 299.00>80.00 (-) 1.17e2



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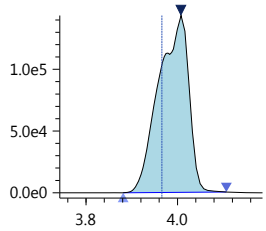
Conc 3.3145
RT 4.008 Area 654985
Q 301.80>80.00 (-) 1.44e5



PFBS-13C_IS
Conc 5.0000
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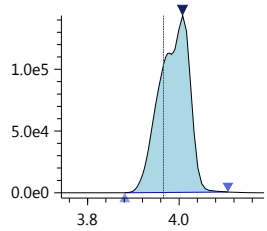
ISTD 301.80>80.00 (-) 1.44e5



PFHxA-13C_IS
Conc 5.0000
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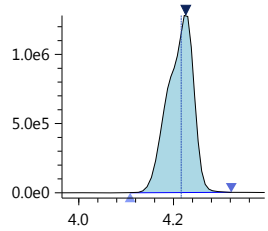
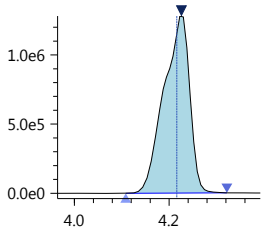
ISTD 314.90>270.10 (-) 1.28e6



PFHxA-13C
Conc 3.5990
RT 4.226 Area 4853540
Q 314.90>270.10 (-) 1.28e6



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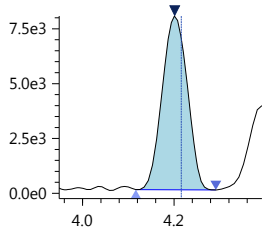
Conc -0.0002
RT 4.202 Area 30285
Q 313.00>269.00 (-) 8.08e3



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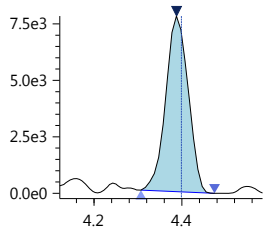
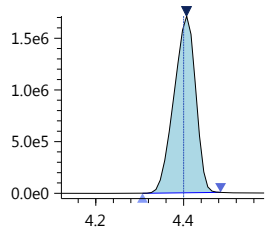
Conc -0.0100
RT 4.388 Area 27655
Q 362.90>319.00 (-) 7.85e3



PFHpA-13C_IS
Conc 5.0000
RT 4.406 Area 5878011
ISTD 366.90>322.10 (-) 1.71e6



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Conc 4.2379
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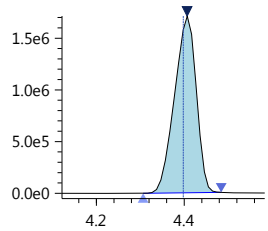
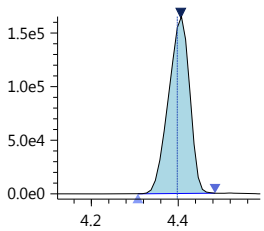
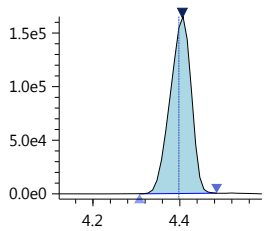


PFHxS-18O_IS
Conc 5.0000
RT 4.406 Area 557743
ISTD 402.70>84.05 (-) 1.65e5



PFHxS-18O
Conc 4.1031
RT 4.406 Area 557743
Q 402.70>84.05 (-) 1.65e5



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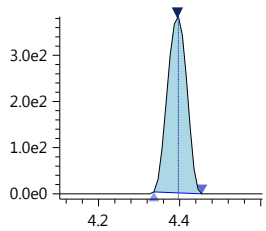
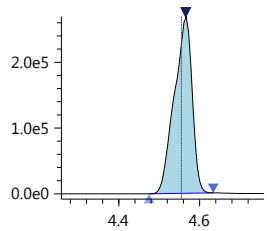
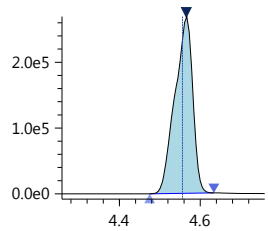
Conc 0.0106
RT 4.395 Area 1286
Q 399.00>80.00 (-) 3.84e2



6_2-FTS-13C
Conc 5.2744
RT 4.566 Area 821558
Q 428.90>409.00 (-) 2.69e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.566 Area 821558
ISTD 428.90>409.00 (-) 2.69e5



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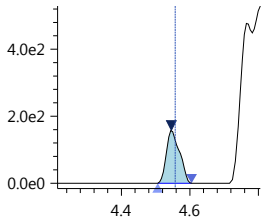
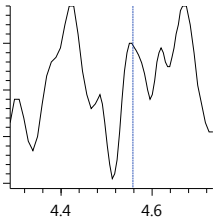
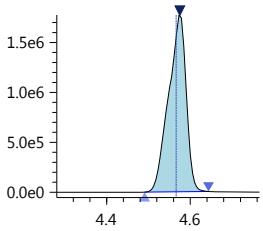
6_2-FTS_1
Conc 0.0024
RT 4.546 Area 420
Q 427.00>407.00 (-) 5.29e2



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.80e1



PFOA-13C_IS
Conc 5.0000
RT 4.575 Area 5190951
ISTD 416.80>372.05 (-) 1.78e6



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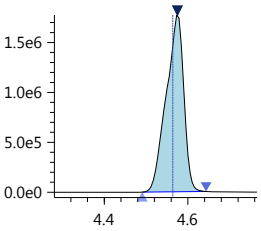
Conc 3.7547
RT 4.575 Area 5190951
Q 416.80>372.05 (-) 1.78e6



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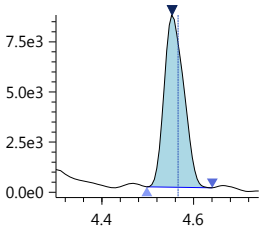
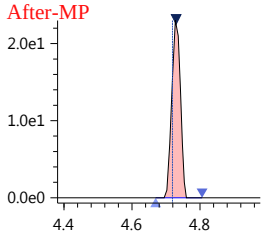
Conc 0.0048
RT 4.553 Area 25727
Q 413.00>369.00 (-) 8.84e3

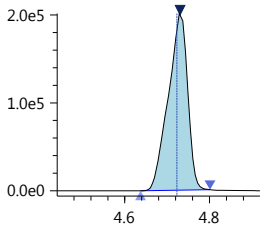


PFOS_1
Conc 0.0005
RT 4.730 Area 41
Q 499.00>80.00 (-) 2.30e1

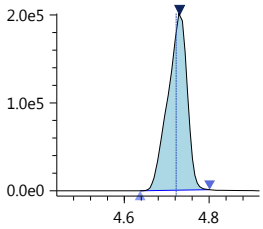
After-MP



PFOS-13C_IS
Conc 5.0000
RT 4.731 Area 634613
ISTD 502.80>80.05 (-) 2.02e5



PFOS-13C
Conc 3.9350
RT 4.731 Area 634613
Q 502.80>80.05 (-) 2.02e5



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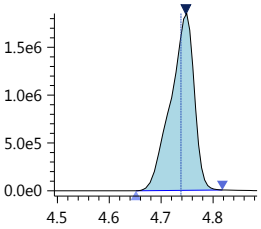
Conc 5.0000
RT 4.748 Area 5781827
ISTD 467.80>423.00 (-) 1.85e6



PFNA-13C
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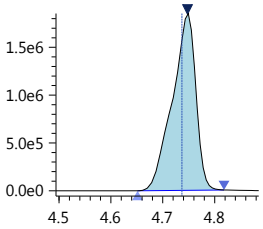
RT 4.748 Area 5781827
Q 467.80>423.00 (-) 1.85e6



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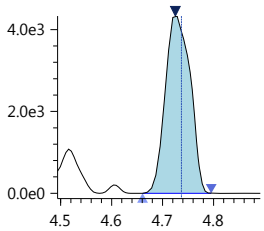
Q 463.00>418.90 (-) 4.33e3



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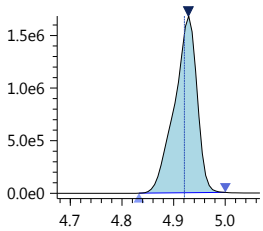
RT 4.929 Area 5087646
ISTD 514.80>469.95 (-) 1.68e6



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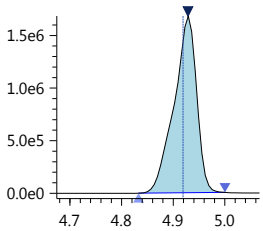
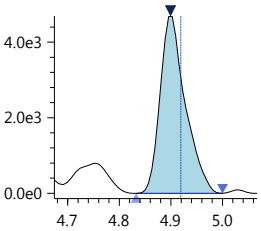
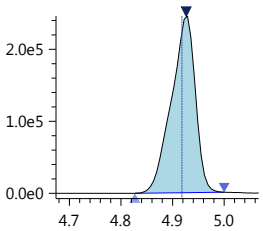
Q 514.80>469.95 (-) 1.68e6



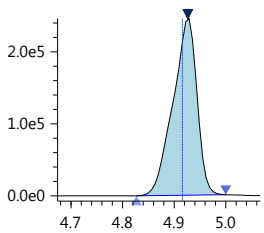
PFDA
Conc 0.0192
RT 4.899 Area 15955
Q 513.00>468.80 (-) 4.69e3



8_2-FTS-13C_IS
Conc 5.0000
RT 4.927 Area 791606
ISTD 528.80>509.00 (-) 2.46e5

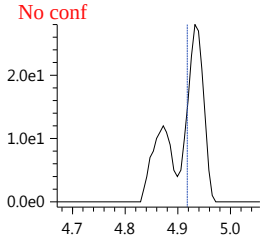


8_2-FTS-13C
Conc 4.3559
RT 4.927 Area 791606
Q 528.80>509.00 (-) 2.46e5



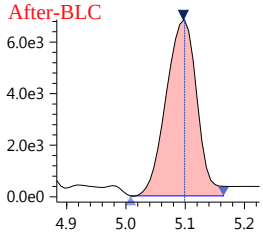
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.80e1

No conf

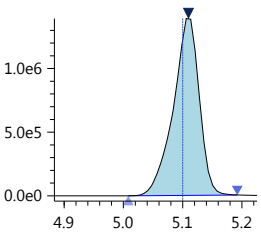


PFUnA
Conc -0.0024
RT 5.097 Area 24762
Q 563.00>518.90 (-) 6.87e3

After-BLC



PFUnA-13C_IS
Conc 5.0000
RT 5.110 Area 4242947
ISTD 564.80>519.95 (-) 1.39e6



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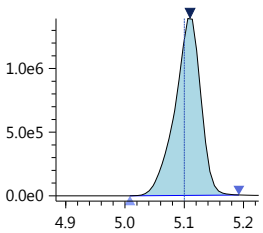
Conc 3.2237
RT 5.110 Area 4242947
Q 564.80>519.95 (-) 1.39e6



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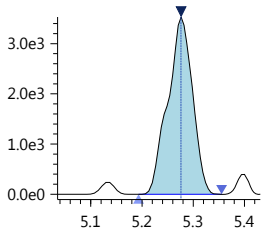
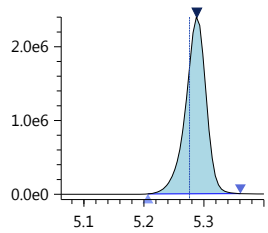
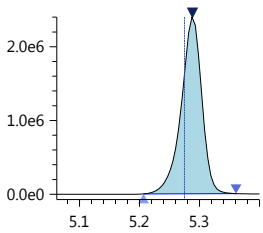
PFDoA
Conc 0.0071
RT 5.276 Area 11824
Q 613.05>569.00 (-) 3.53e3



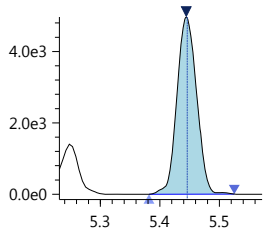
PFDoA-13C
Conc 2.9816
RT 5.288 Area 5716121
Q 614.80>569.95 (-) 2.40e6



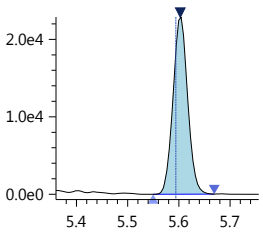
PFDoA-13C_IS
Conc 5.0000
RT 5.288 Area 5716121
ISTD 614.80>569.95 (-) 2.40e6



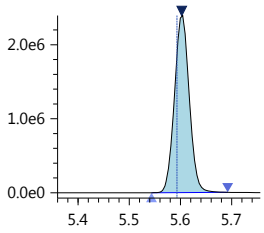
PFTrDA
Conc -0.0008
RT 5.444 Area 11476
Q 663.00>618.90 (-) 4.97e3



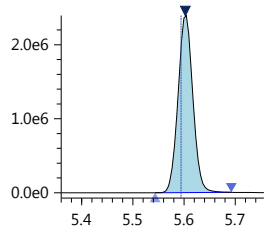
PFTeDA
Conc -0.0023
RT 5.603 Area 45747
Q 713.40>669.00 (-) 2.29e4



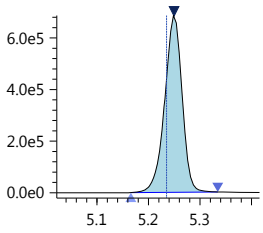
PFTeDA-13C
Conc 3.3999
RT 5.602 Area 4825965
Q 714.70>669.90 (-) 2.40e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.602 Area 4825965
ISTD 714.70>669.90 (-) 2.40e6



FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 1608759
ISTD 506.00>78.05 (-) 6.87e5



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Conc 3.2672
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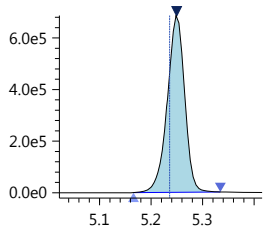
Q 506.00>78.05 (-) 6.87e5



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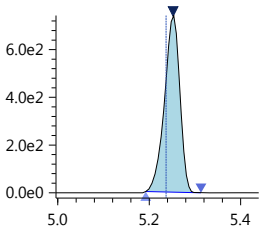
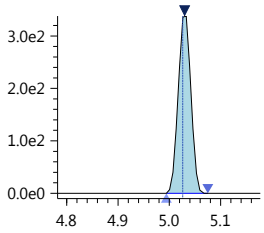
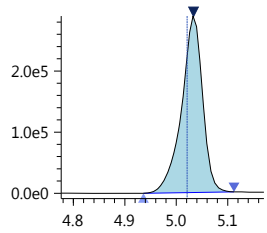
Conc 0.0041
RT 5.252 Area 1731
Q 498.20>78.00 (-) 7.43e2



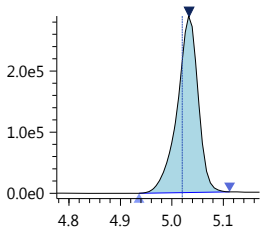
N-MeFOSAA
Conc 0.0058
RT 5.030 Area 588
Q 570.20>419.00 (-) 3.38e2



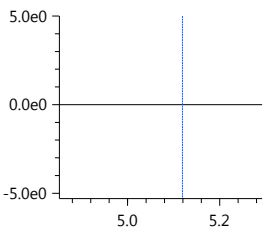
N-MeFOSAA-d3
Conc 2.2705
RT 5.033 Area 815846
Q 572.80>419.05 (-) 2.90e5



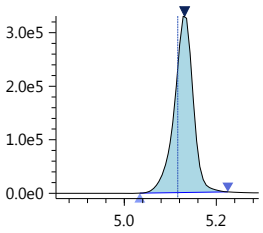
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.033 Area 815846
ISTD 572.80>419.05 (-) 2.90e5



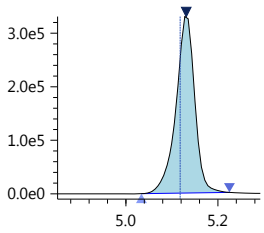
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



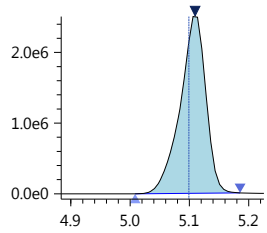
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.131 Area 940510
ISTD 588.80>419.00 (-) 3.31e5



N-EtFOSAA-d5
Conc 2.6237
RT 5.131 Area 940510
Q 588.80>419.00 (-) 3.31e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.110 Area 7575659
ISTD 570.00>525.00 (-) 2.51e6



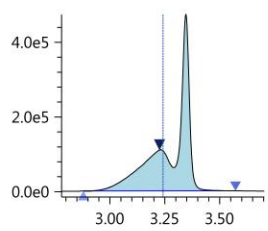
Insight Report

Printed at 3/21/2019 9:16:10 AM

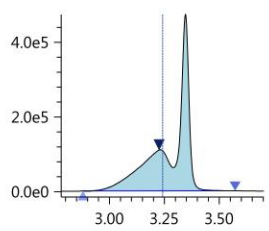
190319_019

Sample ID: K1902064-003
Date acquired: 3/19/2019 1:05:57 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_019.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 2

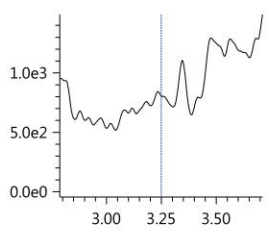
PFBA-13C_IS
Conc 5.0000
RT 3.226 Area 2300435
ISTD 216.90>172.15 (-) 4.74e5



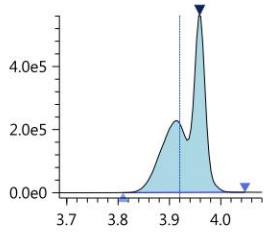
PFBA-13C
Conc 3.4099
RT 3.226 Area 2300435
Q 216.90>172.15 (-) 4.74e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.49e3



PFPeA-13C_IS
Conc 5.0000
RT 3.959 Area 1688864
ISTD 267.90>223.00 (-) 5.62e5



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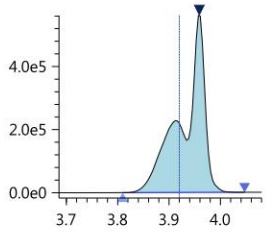
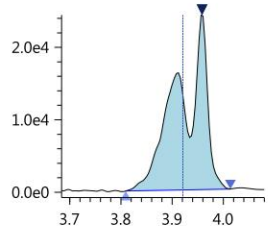
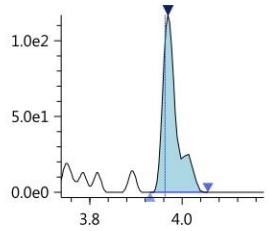
Q 267.90>223.00 (-) 5.62e5



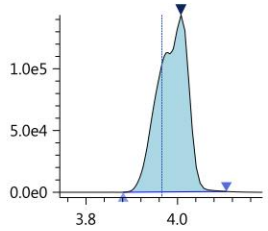
PFPeA
Conc -0.0076
RT 3.958 Area 92216
Q 263.05>219.10 (-) 2.45e4



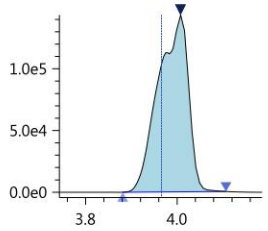
PFBS_1
Conc 0.0018
RT 3.969 Area 246
Q 299.00>80.00 (-) 1.17e2



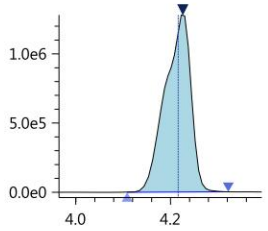
PFBS-13C
Conc 3.3145
RT 4.008 Area 654985
Q 301.80>80.00 (-) 1.44e5



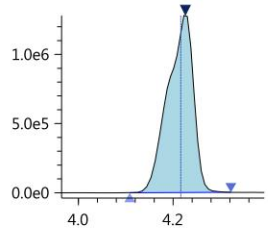
PFBS-13C_IS
Conc 5.0000
RT 4.008 Area 654985
ISTD 301.80>80.00 (-) 1.44e5



PFHxA-13C_IS
Conc 5.0000
RT 4.226 Area 4853540
ISTD 314.90>270.10 (-) 1.28e6



PFHxA-13C
Conc 3.5990
RT 4.226 Area 4853540
Q 314.90>270.10 (-) 1.28e6



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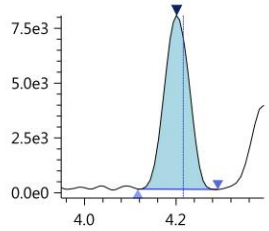
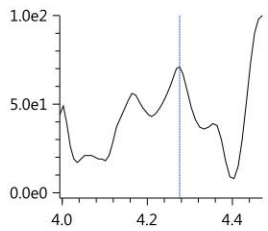
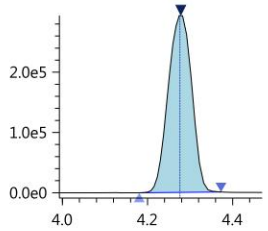
Conc -0.0002
RT 4.202 Area 30285
Q 313.00>269.00 (-) 8.08e3



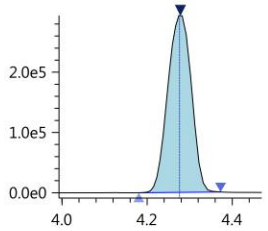
HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 1.00e2



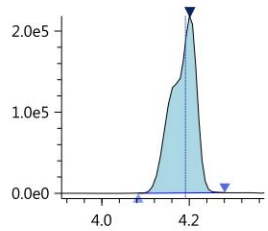
HFPO_DA-13C_IS
Conc 5.0000
RT 4.278 Area 1138015
ISTD 332.00>286.80 (-) 2.94e5



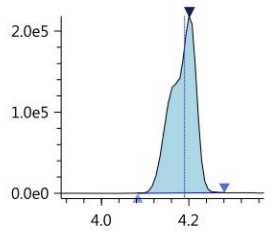
HFPO_DA-13C
Conc 3.8862
RT 4.278 Area 1138015
Q 332.00>286.80 (-) 2.94e5



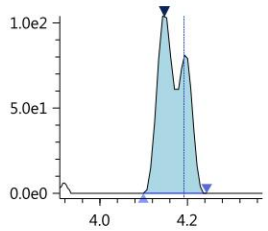
4_2-FTS-13C_IS
Conc 5.0000
RT 4.202 Area 820810
ISTD 328.80>309.05 (-) 2.19e5



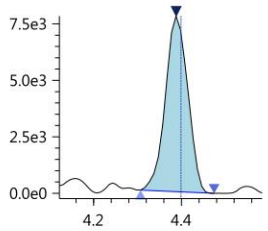
4_2-FTS-13C
Conc 4.6618
RT 4.202 Area 820810
Q 328.80>309.05 (-) 2.19e5



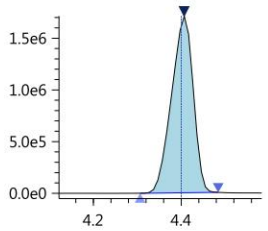
4_2-FTS_1
Conc 0.0023
RT 4.148 Area 442
Q 327.00>307.05 (-) 1.04e2



PFHpA
Conc -0.0100
RT 4.388 Area 27655
Q 362.90>319.00 (-) 7.85e3



PFHpA-13C_IS
Conc 5.0000
RT 4.406 Area 5878011
ISTD 366.90>322.10 (-) 1.71e6



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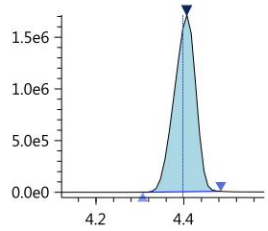
PFHpA-13C
Conc 4.2379
RT 4.406 Area 5878011
Q 366.90>322.10 (-) 1.71e6



PFHxS-18O_IS
Conc 5.0000
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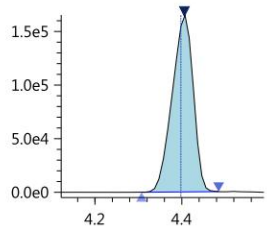
ISTD 402.70>84.05 (-) 1.65e5



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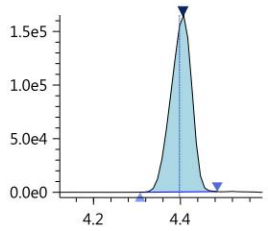
Conc 4.1031
RT 4.406 Area 557743
Q 402.70>84.05 (-) 1.65e5



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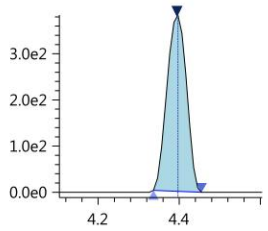
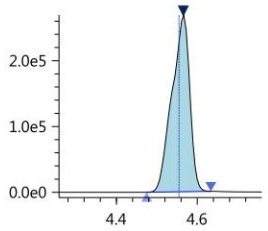
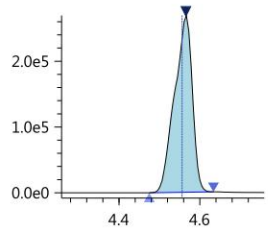
Conc 0.0106
RT 4.395 Area 1286
Q 399.00>80.00 (-) 3.84e2



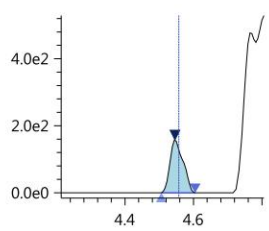
6_2-FTS-13C
Conc 5.2744
RT 4.566 Area 821558
Q 428.90>409.00 (-) 2.69e5



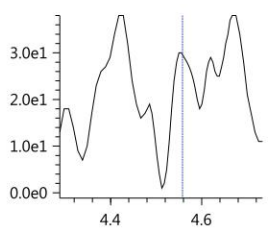
6_2-FTS-13C_IS
Conc 5.0000
RT 4.566 Area 821558
ISTD 428.90>409.00 (-) 2.69e5



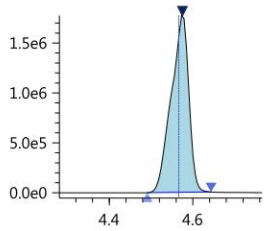
6_2-FTS_1
Conc 0.0024
RT 4.546 Area 420
Q 427.00>407.00 (-) 5.29e2



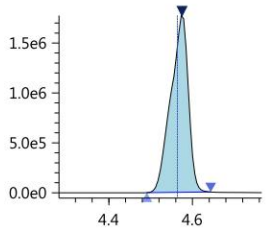
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 3.80e1



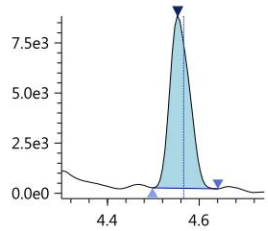
PFOA-13C_IS
Conc 5.0000
RT 4.575 Area 5190951
ISTD 416.80>372.05 (-) 1.78e6



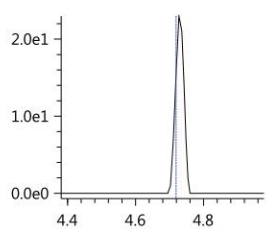
PFOA-13C
Conc 3.7547
RT 4.575 Area 5190951
Q 416.80>372.05 (-) 1.78e6



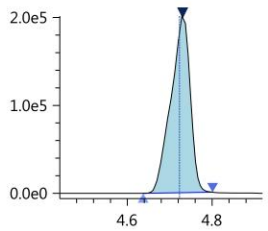
PFOA
Conc 0.0048
RT 4.553 Area 25727
Q 413.00>369.00 (-) 8.84e3



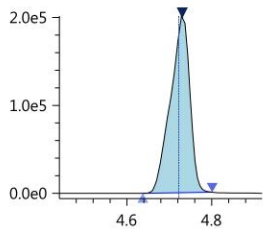
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 2.30e1



PFOS-13C_IS
Conc 5.0000
RT 4.731 Area 634613
ISTD 502.80>80.05 (-) 2.02e5



PFOS-13C
Conc 3.9350
RT 4.731 Area 634613
Q 502.80>80.05 (-) 2.02e5



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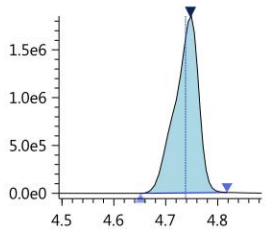
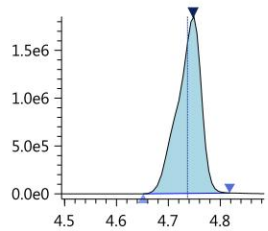
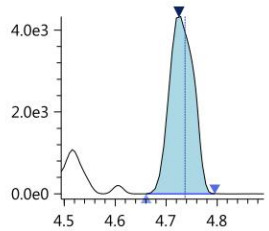
Conc 5.0000
RT 4.748 Area 5781827
ISTD 467.80>423.00 (-) 1.85e6



PFNA-13C
Conc 3.7288
RT 4.748 Area 5781827
Q 467.80>423.00 (-) 1.85e6



PFNA
Conc 0.0020
RT 4.725 Area 14858
Q 463.00>418.90 (-) 4.33e3



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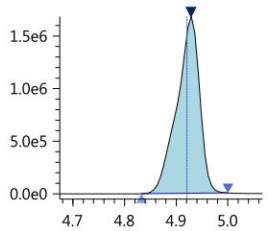
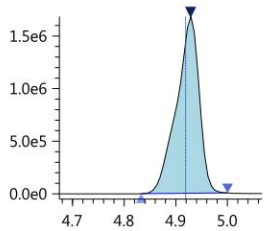
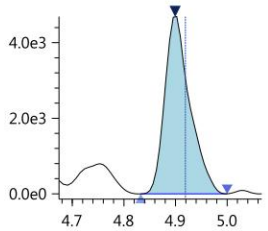
Conc 5.0000
RT 4.929 Area 5087646
ISTD 514.80>469.95 (-) 1.68e6



PFDA-13C
Conc 3.4781
RT 4.929 Area 5087646
Q 514.80>469.95 (-) 1.68e6



PFDA
Conc 0.0192
RT 4.899 Area 15955
Q 513.00>468.80 (-) 4.69e3



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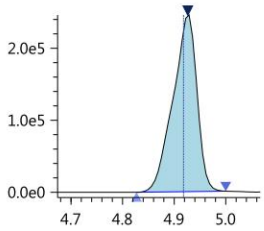
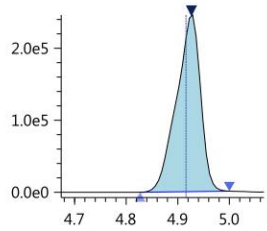
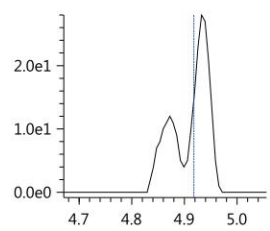
8_2-FTS-13C_IS
Conc 5.0000
RT 4.927 Area 791606
ISTD 528.80>509.00 (-) 2.46e5



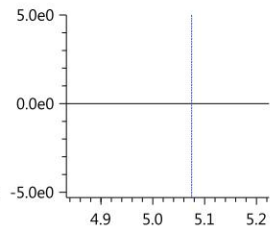
8_2-FTS-13C
Conc 4.3559
RT 4.927 Area 791606
Q 528.80>509.00 (-) 2.46e5



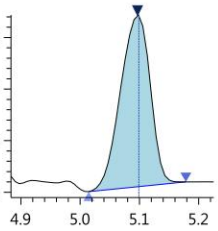
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 2.80e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc -0.0046
RT 5.097 Area 23304
Q 563.00>518.90 (-) 6.87e3



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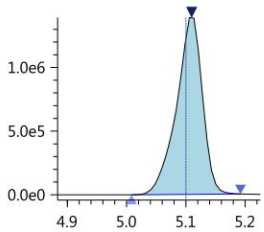
Conc 5.0000
RT 5.110 Area 4242947
ISTD 564.80>519.95 (-) 1.39e6



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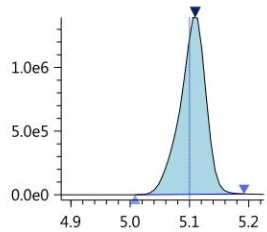
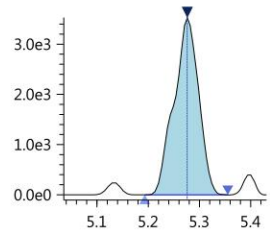
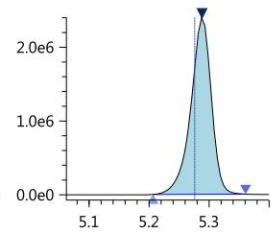
Conc 3.2237
RT 5.110 Area 4242947
Q 564.80>519.95 (-) 1.39e6



PFDoA
Conc 0.0071
RT 5.276 Area 11824
Q 613.05>569.00 (-) 3.53e3



PFDoA-13C
Conc 2.9816
RT 5.288 Area 5716121
Q 614.80>569.95 (-) 2.40e6



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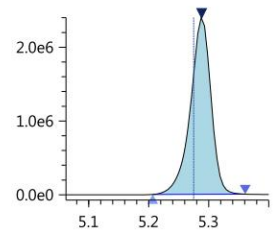
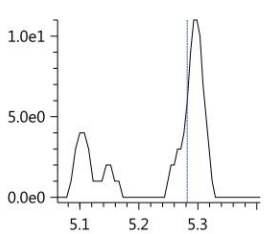
Conc 5.0000
RT 5.288 Area 5716121
ISTD 614.80>569.95 (-) 2.40e6



10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.10e1



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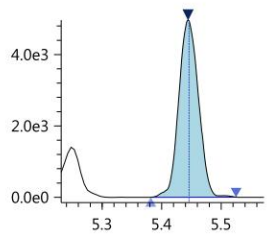
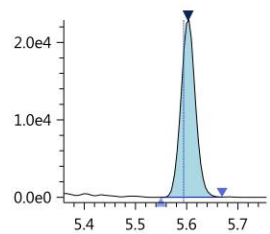
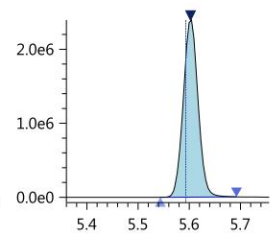
Conc -0.0008
RT 5.444 Area 11476
Q 663.00>618.90 (-) 4.97e3



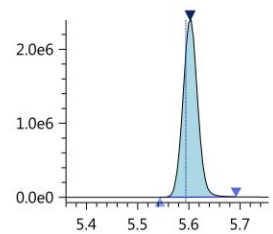
PFTeDA
Conc -0.0023
RT 5.603 Area 45747
Q 713.40>669.00 (-) 2.29e4



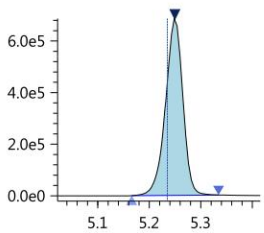
PFTeDA-13C
Conc 3.3999
RT 5.602 Area 4825965
Q 714.70>669.90 (-) 2.40e6



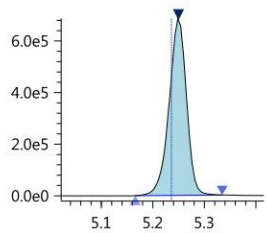
PFTeDA-13C_IS
Conc 5.0000
RT 5.602 Area 4825965
ISTD 714.70>669.90 (-) 2.40e6



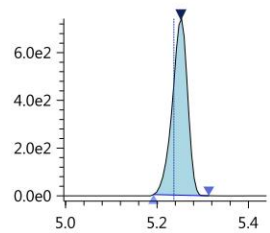
FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 1608759
ISTD 506.00>78.05 (-) 6.87e5



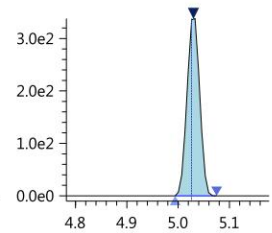
FOSA-13C
Conc 3.2672
RT 5.250 Area 1608759
Q 506.00>78.05 (-) 6.87e5



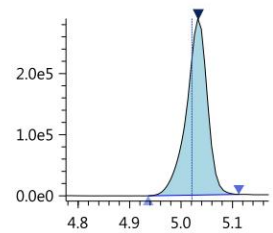
FOSA
Conc 0.0041
RT 5.252 Area 1731
Q 498.20>78.00 (-) 7.43e2



N-MeFOSAA
Conc 0.0058
RT 5.030 Area 588
Q 570.20>419.00 (-) 3.38e2



N-MeFOSAA-d3
Conc 2.2705
RT 5.033 Area 815846
Q 572.80>419.05 (-) 2.90e5



Insight Report

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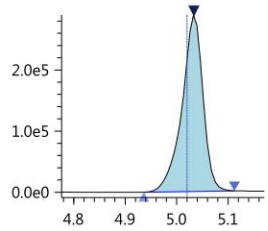
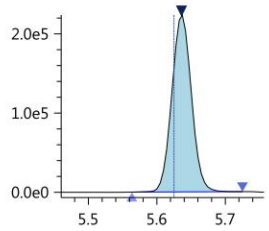
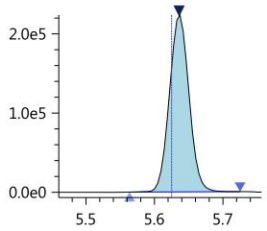
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.033 Area 815846
ISTD 572.80>419.05 (-) 2.90e5



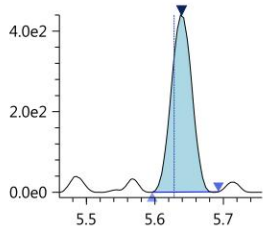
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.636 Area 446372
ISTD 514.90>168.90 (-) 2.24e5



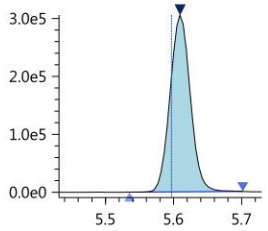
N-MeFOSA-d3
Conc 2.4946
RT 5.636 Area 446372
Q 514.90>168.90 (-) 2.24e5



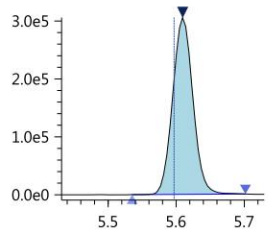
N-MeFOSA
Conc 0.0089
RT 5.639 Area 936
Q 512.00>169.10 (-) 4.40e2



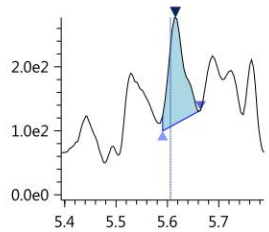
N-MeFOSE-d7
Conc 3.3415
RT 5.610 Area 632299
Q 622.70>59.10 (-) 3.06e5



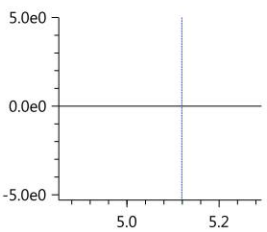
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.610 Area 632299
ISTD 622.70>59.10 (-) 3.06e5



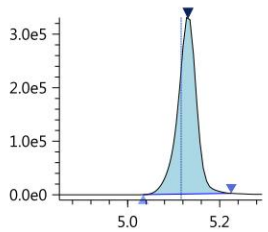
N-MeFOSE
Conc 0.0021
RT 5.616 Area 348
Q 616.00>59.00 (-) 2.77e2



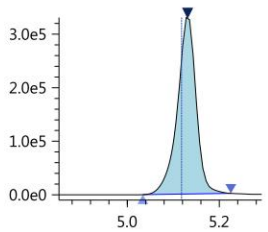
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



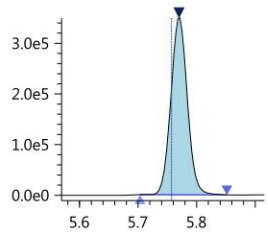
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.131 Area 940510
ISTD 588.80>419.00 (-) 3.31e5



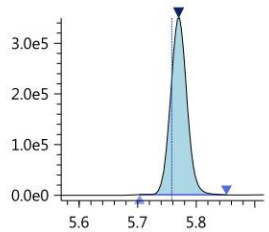
N-EtFOSAA-d5
Conc 2.6237
RT 5.131 Area 940510
Q 588.80>419.00 (-) 3.31e5



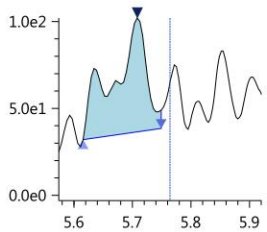
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.770 Area 685362
ISTD 530.90>169.15 (-) 3.50e5



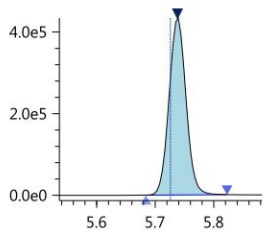
N-EtFOSA-d9
Conc 2.7662
RT 5.770 Area 685362
Q 530.90>169.15 (-) 3.50e5



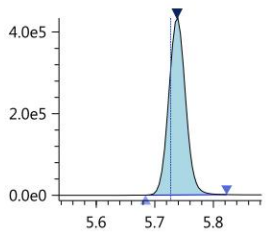
N-EtFOSA
Conc 0.0114
RT 5.708 Area 259
Q 526.90>169.10 (-) 1.02e2



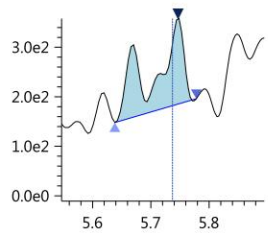
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.738 Area 874035
ISTD 638.70>59.10 (-) 4.34e5



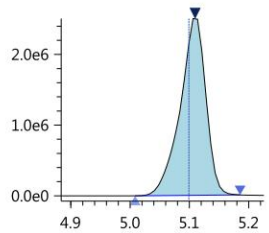
N-EtFOSE-d9
Conc 3.3465
RT 5.738 Area 874035
Q 638.70>59.10 (-) 4.34e5



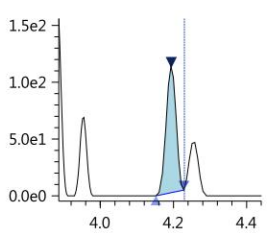
N-EtFOSE
Conc 0.0038
RT 5.747 Area 617
Q 630.00>58.90 (-) 3.58e2



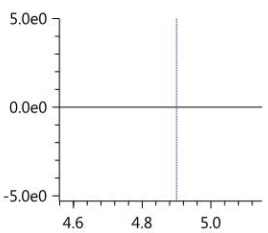
13C7-PFUnDA_IS
Conc 5.0000
RT 5.110 Area 7575659
ISTD 570.00>525.00 (-) 2.51e6



PFPeS
Conc 0.0025
RT 4.194 Area 211
Q 349.00>99.00 (-) 1.56e2



PFNS
Conc ----
RT ---- Area ----
Q 549.00>99.00 (-) 0.00e0



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_020
Lab ID: K1902064-004
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 13:16
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_020	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:16	**Vial:**	6
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-004	**Raw Units:**	ng/mL

Bottle ID:	K1902064-004.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.108	-0.01	7480871	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.010	0.00	780680	4.0006	80	20 - 109	Y
18O2-PFHxS	4.408	0.00	573584	4.2731	85	26 - 122	Y
13C4-PFOS	4.732		640639	4.0227	80	25 - 121	Y
13C4-PFBA	3.218	-0.14	2390791	3.5888	72	27 - 124	Y
13C5-PFPeA	3.960		1730858	4.0081	80	27 - 138	Y
13C2-PFHxA	4.228	0.00	4768186	3.5805	72	28 - 132	Y
13C4-PFHpA	4.408	0.00	5747950	4.1966	84	19 - 139	Y
13C4-PFOA	4.576		5362373	3.9279	79	22 - 130	Y
13C5-PFNA	4.748	0.00	5913105	3.8617	77	20 - 127	Y
13C2-PFDA	4.928	0.00	5272834	3.6504	73	24 - 125	Y
13C2-PFUnDA	5.108	-0.01	4926016	3.7902	76	22 - 125	Y
13C2-PFDoDA	5.286	0.00	6237827	3.2950	66	19 - 122	Y
13C2-PFTeDA	5.601	0.00	5027321	3.5866	72	13 - 124	Y
13C8-FOSA	5.247	+0.00	1626766	3.3456	67	18 - 109	Y
D3-MeFOSAA	5.033	-0.01	831687	2.3439	47	9 - 123	Y
D5-EtFOSAA	5.129	0.00	921841	2.6042	52	12 - 126	Y
13C2-6:2 FTS	4.567		917232	5.9633	119	10 - 226	Y
13C2-8:2 FTS	4.926	0.00	806992	4.4968	90	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)	4.008	0.00	421	0.0025	0.070	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.402	-0.01	944	0.0076	0.21	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

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1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_020	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:16	**Vial:**	6
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-004	**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)	4.736	+0.00	715	0.0082	0.23	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.960	0.00	104253	0.0047	0.13	U	Y
Perfluorohexanoic acid (PFHxA)	4.206	-0.02	34806	0.0058	0.16	U	Y
Perfluoroheptanoic acid (PFHpA)	4.393	-0.02	24868	-0.0124	0	U	Y
Perfluorooctanoic acid (PFOA)	4.553	-0.02	24324	0.0022	0.062	U	Y
Perfluorononanoic acid (PFNA)	4.718	-0.03	19426	0.0073	0.20	U	Y
Perfluorodecanoic acid (PFDA)	4.916	-0.01	16553	0.0192	0.54	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.104	-0.01	19551	-0.0145	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.282	-0.01	12245	0.0062	0.17	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.449	-0.01	13576	0.0010	0.028	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.601	0.00	48445	0.0000	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.247	+0.00	2051	0.0048	0.13	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.022	-0.02	778	0.0076	0.21	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.560	-0.01	557	0.0029	0.081	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0		0	0	0	U	Y

Prep Amount:	285.0000 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: 3/21/19 10:05

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_020

Sample ID: K1902064-004
Date acquired: 3/19/2019 1:16:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_020.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.218	2390791	2390791	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.218	2390791	7480871	26	3.5888	ng/mL	----
PFBA	ND(W/B)	----	----	2390791	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.960	1730858	1730858	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.960	1730858	7480871	26	4.0081	ng/mL	----
PFPeA	Auto	3.960	104253	1730858	4	0.0047	ng/mL	----
PFBS_1	M	4.008	421	780680	16	0.0025	ng/mL	----
PFBS-13C	Auto	4.010	780680	7480871	26	4.0006	ng/mL	----
PFBS-13C_IS	Auto	4.010	780680	780680	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.228	4768186	4768186	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.228	4768186	7480871	26	3.5805	ng/mL	----
PFHxA	M	4.206	34806	4768186	6	0.0058	ng/mL	----
PFHpA	Auto	4.393	24868	5747950	8	-0.0124	ng/mL	----
PFHpA-13C_IS	Auto	4.408	5747950	5747950	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.408	5747950	7480871	26	4.1966	ng/mL	----
PFHxS-18O_IS	Auto	4.408	573584	573584	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.408	573584	7480871	26	4.2731	ng/mL	----
PFHxS_1	Auto	4.402	944	573584	7	0.0076	ng/mL	----
6_2-FTS-13C	Auto	4.567	917232	7480871	26	5.9633	ng/mL	----
6_2-FTS-13C_IS	Auto	4.567	917232	917232	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.560	557	917232	10	0.0029	ng/mL	----
PFHpS_1	ND(W/B)	----	----	573584	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.576	5362373	5362373	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.576	5362373	7480871	26	3.9279	ng/mL	----
PFOA	Auto	4.553	24324	5362373	9	0.0022	ng/mL	----
PFOS_1	M	4.736	715	640639	13	0.0082	ng/mL	----
PFOS-13C_IS	Auto	4.732	640639	640639	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.732	640639	7480871	26	4.0227	ng/mL	----
PFNA-13C_IS	Auto	4.748	5913105	5913105	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.748	5913105	7480871	26	3.8617	ng/mL	----
PFNA	M	4.718	19426	5913105	11	0.0073	ng/mL	----
PFDA-13C_IS	Auto	4.928	5272834	5272834	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.928	5272834	7480871	26	3.6504	ng/mL	----
PFDA	Auto	4.916	16553	5272834	12	0.0192	ng/mL	----
8_2-FTS-13C_IS	Auto	4.926	806992	806992	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.926	806992	7480871	26	4.4968	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	806992	15	----	ng/mL	----
PFUnA	Auto	5.104	19551	4926016	14	-0.0145	ng/mL	----
PFUnA-13C_IS	Auto	5.108	4926016	4926016	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.108	4926016	7480871	26	3.7902	ng/mL	----
PFDoA	Auto	5.282	12245	6237827	17	0.0062	ng/mL	----
PFDoA-13C	Auto	5.286	6237827	7480871	26	3.2950	ng/mL	----
PFDoA-13C_IS	Auto	5.286	6237827	6237827	17	5.0000	ng/mL	----
PFTrDA	M	5.449	13576	5027321	22	0.0010	ng/mL	----
PFTeDA	Auto	5.601	48445	5027321	22	0.0000	ng/mL	----
PFTeDA-13C	Auto	5.601	5027321	7480871	26	3.5866	ng/mL	----
PFTeDA-13C_IS	Auto	5.601	5027321	5027321	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.247	1626766	1626766	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.247	1626766	7480871	26	3.3456	ng/mL	----
FOSA	Auto	5.247	2051	1626766	18	0.0048	ng/mL	----
N-MeFOSAA	Auto	5.022	778	831687	19	0.0076	ng/mL	----
N-MeFOSAA-d3	Auto	5.033	831687	7480871	26	2.3439	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.033	831687	831687	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	921841	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.129	921841	921841	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.129	921841	7480871	26	2.6042	ng/mL	----
13C7-PFUnDA_IS	Auto	5.108	7480871	7480871	26	5.0000	ng/mL	----

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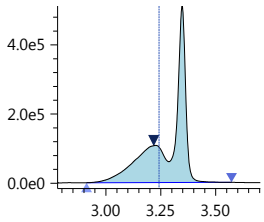
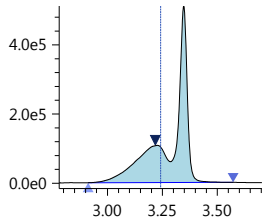
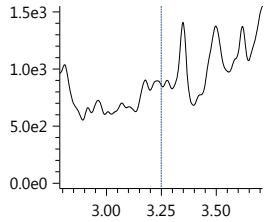
PFBA-13C_IS
Conc 5.0000
RT 3.218 Area 2390791
ISTD 216.90>172.15 (-) 5.13e5



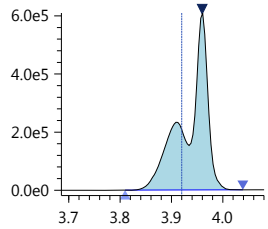
PFBA-13C
Conc 3.5888
RT 3.218 Area 2390791
Q 216.90>172.15 (-) 5.13e5



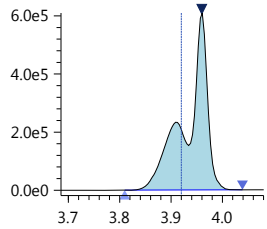
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.55e3



PFPeA-13C_IS
Conc 5.0000
RT 3.960 Area 1730858
ISTD 267.90>223.00 (-) 6.10e5



PFPeA-13C
Conc 4.0081
RT 3.960 Area 1730858
Q 267.90>223.00 (-) 6.10e5



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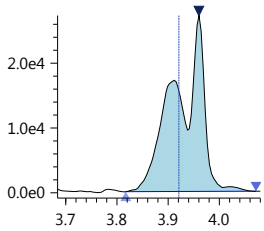
Q 263.05>219.10 (-) 2.74e4



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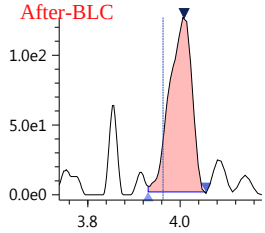
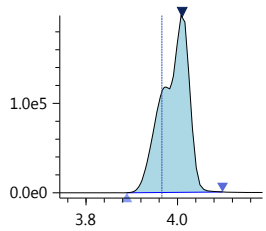
Conc 0.0025
RT 4.008 Area 421
Q 299.00>80.00 (-) 1.27e2



PFBS-13C
Conc 4.0006
RT 4.010 Area 780680
Q 301.80>80.00 (-) 1.98e5



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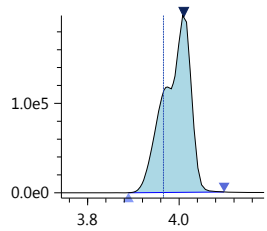

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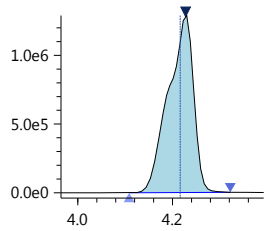
Conc 5.0000
RT 4.228 Area 4768186
ISTD 314.90>270.10 (-) 1.29e6



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Conc 3.5805
RT 4.228 Area 4768186
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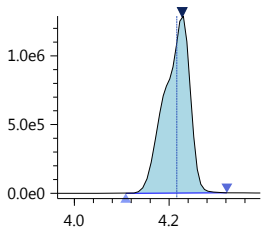

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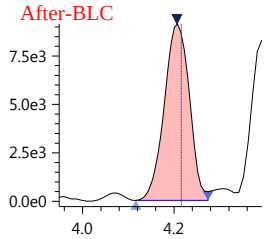
Conc 0.0058
RT 4.206 Area 34806
Q 313.00>269.00 (-) 9.15e3



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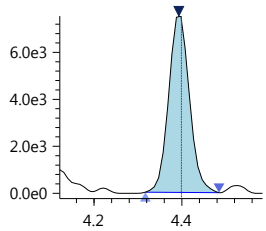
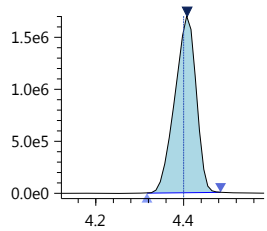
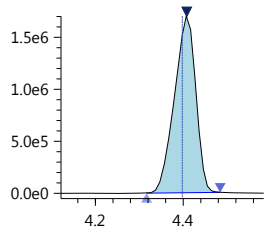
Conc -0.0124
RT 4.393 Area 24868
Q 362.90>319.00 (-) 7.55e3



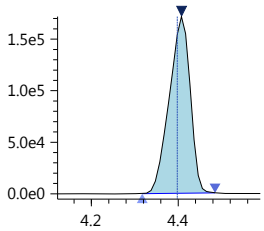
PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 5747950
ISTD 366.90>322.10 (-) 1.70e6



PFHpA-13C
Conc 4.1966
RT 4.408 Area 5747950
Q 366.90>322.10 (-) 1.70e6



PFHxS-18O_IS
Conc 5.0000
RT 4.408 Area 573584
ISTD 402.70>84.05 (-) 1.72e5



PFHxS-18O
Conc 4.2731
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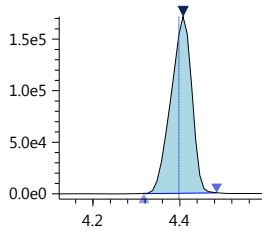
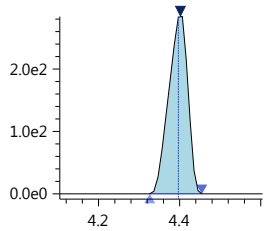
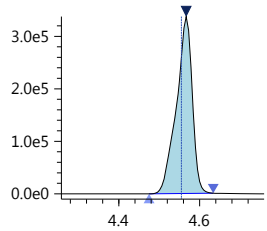
Q 402.70>84.05 (-) 1.72e5



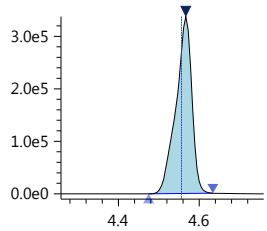
PFHxS_1
Conc 0.0076
RT 4.402 Area 944
Q 399.00>80.00 (-) 2.84e2



6_2-FTS-13C
Conc 5.9633
RT 4.567 Area 917232
Q 428.90>409.00 (-) 3.38e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 917232
ISTD 428.90>409.00 (-) 3.38e5



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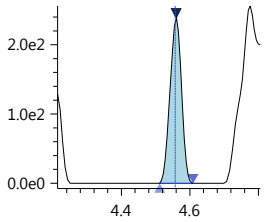
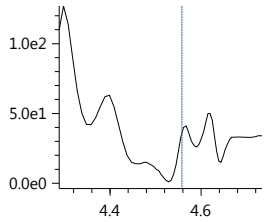
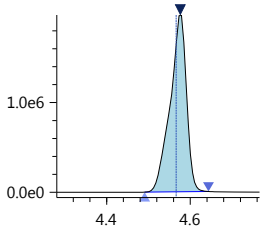
6_2-FTS_1
Conc 0.0029
RT 4.560 Area 557
Q 427.00>407.00 (-) 2.56e2



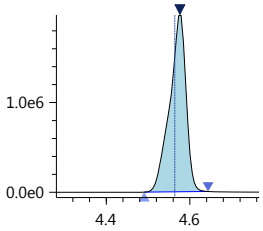
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 1.27e2



PFOA-13C_IS
Conc 5.0000
RT 4.576 Area 5362373
ISTD 416.80>372.05 (-) 1.98e6



PFOA-13C
Conc 3.9279
RT 4.576 Area 5362373
Q 416.80>372.05 (-) 1.98e6



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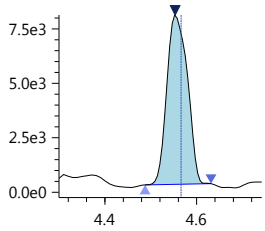
Conc 0.0022
RT 4.553 Area 24324
Q 413.00>369.00 (-) 8.14e3



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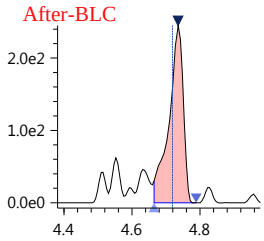
Conc 0.0082
RT 4.736 Area 715
Q 499.00>80.00 (-) 2.45e2



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Conc 5.0000
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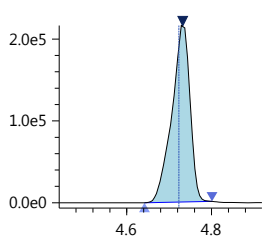
ISTD 502.80>80.05 (-) 2.17e5



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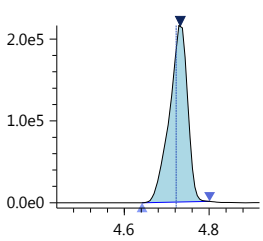
Conc 4.0227
RT 4.732 Area 640639
Q 502.80>80.05 (-) 2.17e5



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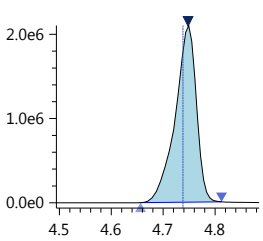
Conc 5.0000
RT 4.748 Area 5913105
ISTD 467.80>423.00 (-) 2.10e6



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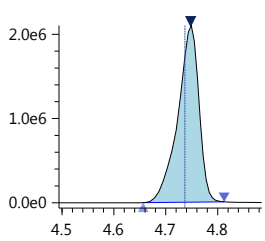
Q 467.80>423.00 (-) 2.10e6



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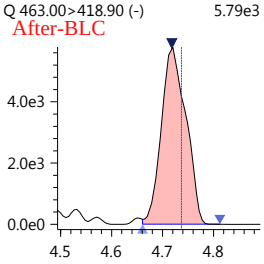
Conc 0.0073
RT 4.718 Area 19426
Q 463.00>418.90 (-) 5.79e3



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Conc 5.0000
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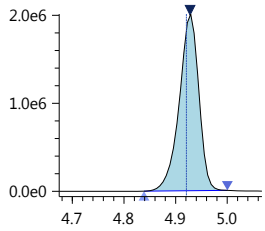
ISTD 514.80>469.95 (-) 2.02e6



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Conc 3.6504
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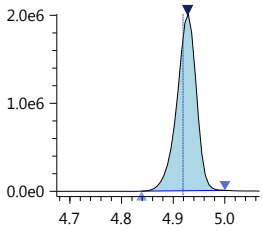
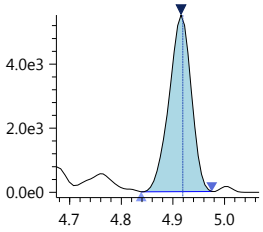
Q 514.80>469.95 (-) 2.02e6



PFDA
Conc 0.0192
RT 4.916 Area 16553
Q 513.00>468.80 (-) 5.53e3



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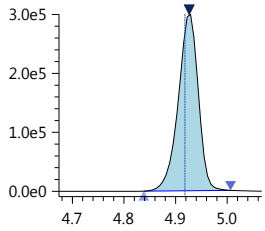
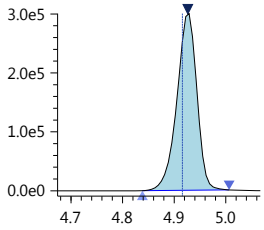
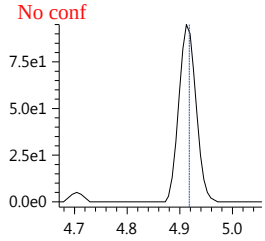
RT 4.926 Area 806992
ISTD 528.80>509.00 (-) 3.01e5



8_2-FTS-13C
Conc 4.4968
RT 4.926 Area 806992
Q 528.80>509.00 (-) 3.01e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 9.50e1



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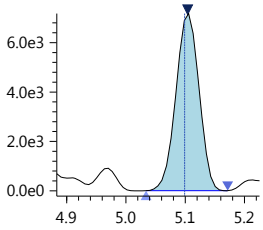
Conc -0.0145
RT 5.104 Area 19551
Q 563.00>518.90 (-) 7.18e3



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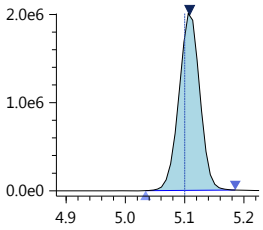
Conc 5.0000
RT 5.108 Area 4926016
ISTD 564.80>519.95 (-) 2.01e6



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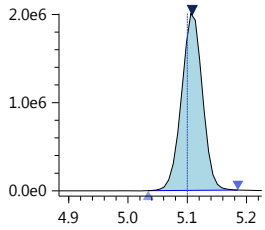

Insight Report

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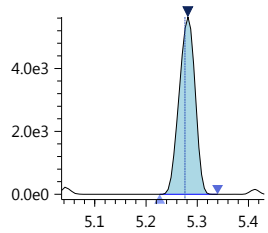
Q 613.05>569.00 (-) 5.64e3



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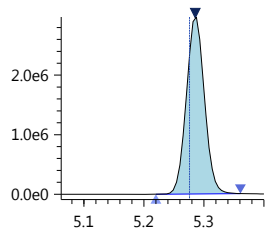
Conc 3.2950
RT 5.286 Area 6237827
Q 614.80>569.95 (-) 2.98e6



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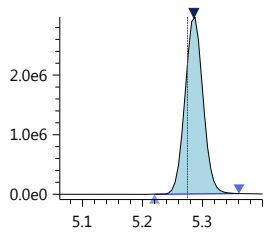

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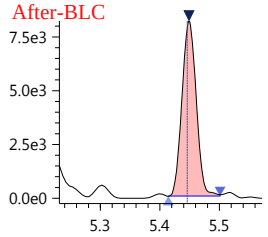

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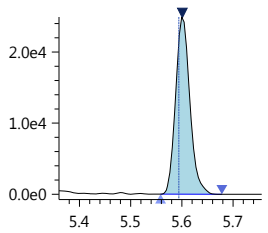
RT 5.601 Area 48445
Q 713.40>669.00 (-) 2.49e4



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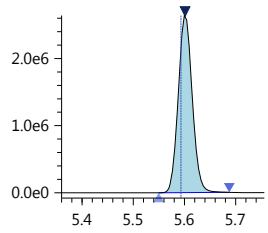

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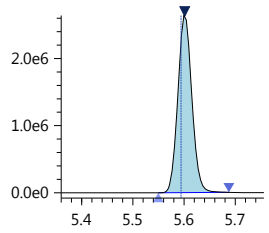

FOSA-13C_IS
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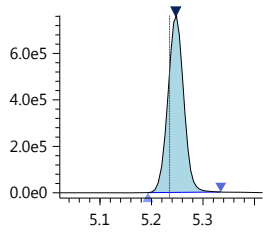

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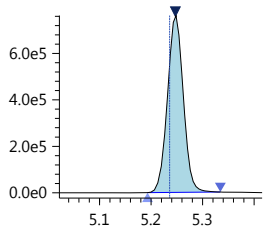

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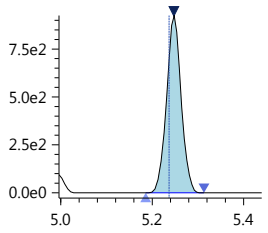

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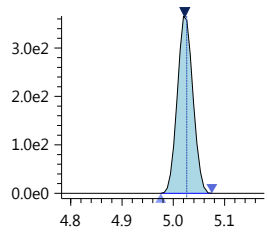
RT 5.022 Area 778
Q 570.20>419.00 (-) 3.66e2



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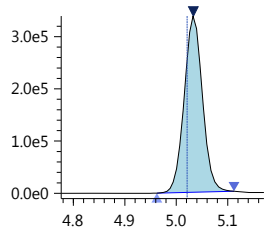
Conc 2.3439
RT 5.033 Area 831687
Q 572.80>419.05 (-) 3.40e5



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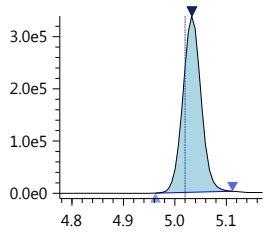
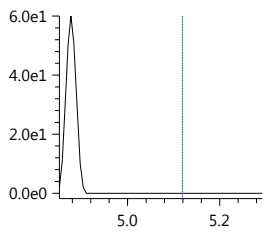
ISTD 572.80>419.05 (-) 3.40e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 6.00e1



N-EtFOSAA-d5_IS
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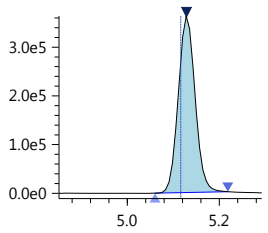
ISTD 588.80>419.00 (-) 3.64e5



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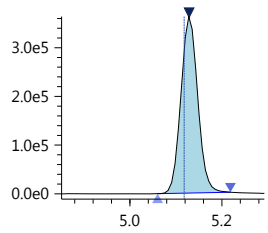

13C7-PFUnDA_IS
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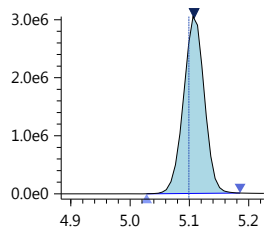
ISTD 570.00>525.00 (-) 3.05e6



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Printed at 3/21/2019 9:16:10 AM

190319_020

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Acquired by: System Administrator
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PFBA-13C_IS
Conc 5.0000
RT 3.218 Area 2390791
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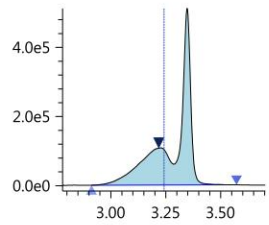

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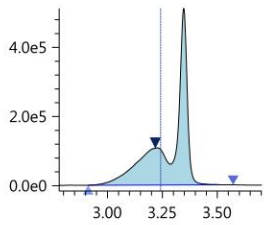

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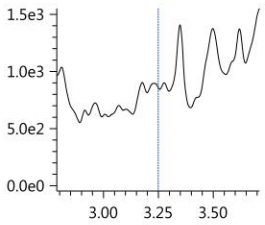
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.55e3



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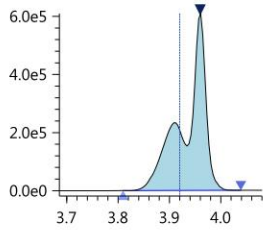
RT 3.960 Area 1730858
ISTD 267.90>223.00 (-) 6.10e5



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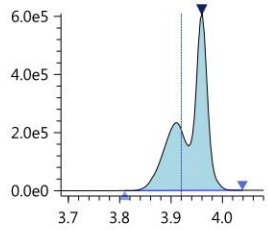

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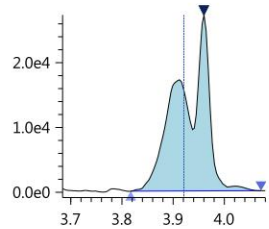
RT 3.960 Area 104253
Q 263.05>219.10 (-) 2.74e4



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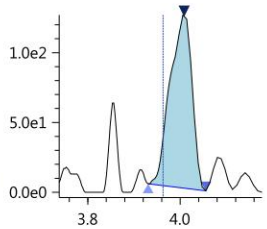
Conc 0.0024
RT 4.008 Area 410
Q 299.00>80.00 (-) 1.27e2



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Conc 4.0006
RT 4.010 Area 780680
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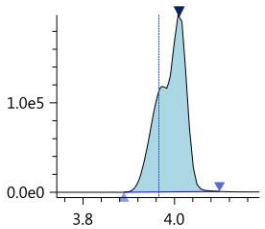

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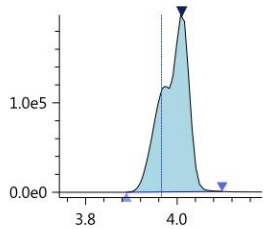

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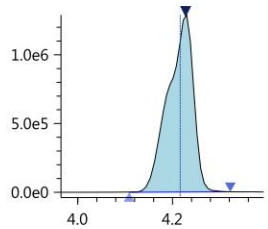

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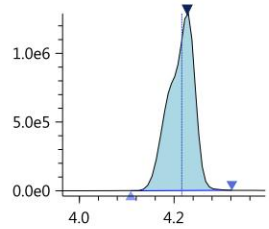

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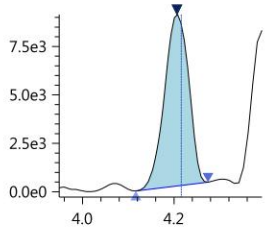
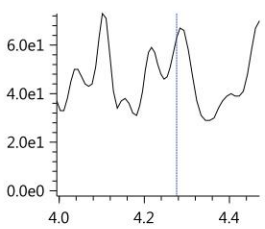


HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 7.30e1



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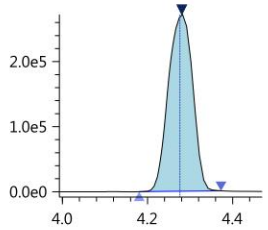
ISTD 332.00>286.80 (-) 2.72e5



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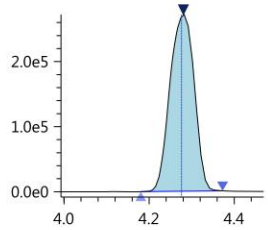

4_2-FTS-13C_IS
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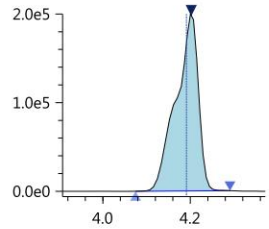
ISTD 328.80>309.05 (-) 2.00e5



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Conc 4.0324
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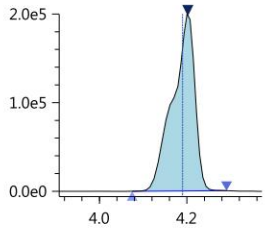
Q 328.80>309.05 (-) 2.00e5



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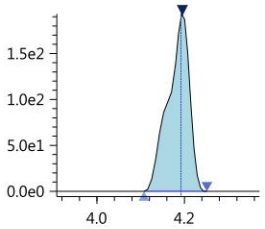
Q 327.00>307.05 (-) 1.93e2



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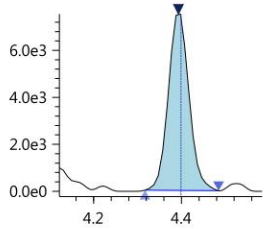
Conc -0.0124
RT 4.393 Area 24868
Q 362.90>319.00 (-) 7.55e3



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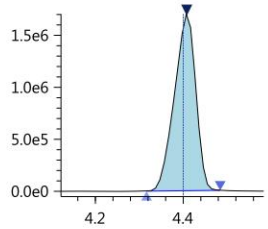

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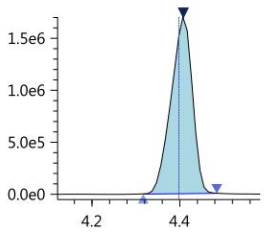

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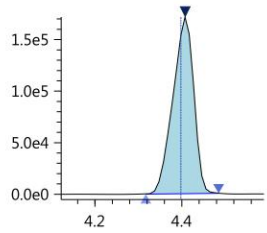

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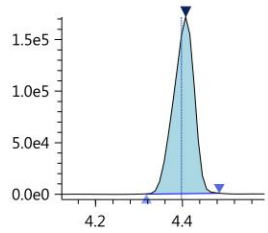
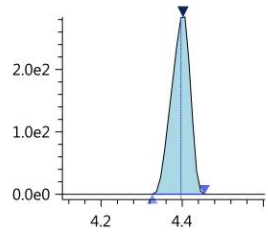
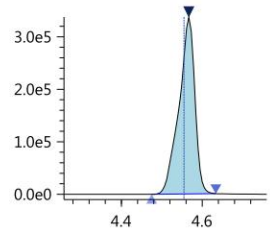
RT 4.408 Area 573584
Q 402.70>84.05 (-) 1.72e5



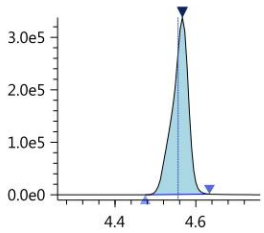
PFHxS_1
Conc 0.0076
RT 4.402 Area 944
Q 399.00>80.00 (-) 2.84e2



6_2-FTS-13C
Conc 5.9633
RT 4.567 Area 917232
Q 428.90>409.00 (-) 3.38e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 917232
ISTD 428.90>409.00 (-) 3.38e5



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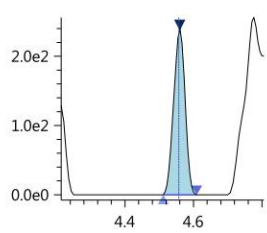
Conc 0.0029
RT 4.560 Area 557
Q 427.00>407.00 (-) 2.56e2



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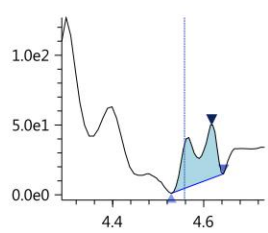
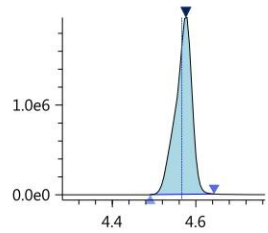
Conc 0.0010
RT 4.618 Area 145
Q 449.00>80.15 (-) 1.27e2



PFOA-13C_IS
Conc 5.0000
RT 4.576 Area 5362373
ISTD 416.80>372.05 (-) 1.98e6



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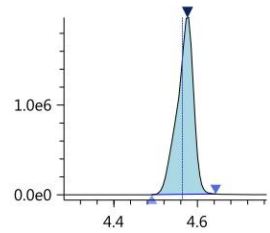
Conc 3.9279
RT 4.576 Area 5362373
Q 416.80>372.05 (-) 1.98e6



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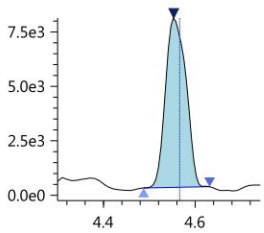
Conc 0.0022
RT 4.553 Area 24324
Q 413.00>369.00 (-) 8.14e3



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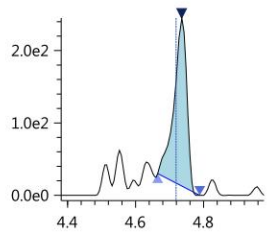
RT 4.736 Area 603
Q 499.00>80.00 (-) 2.45e2



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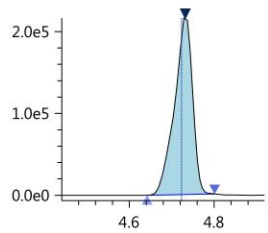
RT 4.732 Area 640639
ISTD 502.80>80.05 (-) 2.17e5



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Conc 4.0227
RT 4.732 Area 640639
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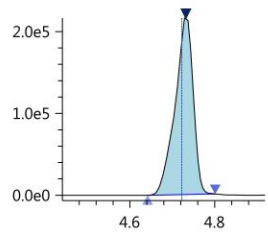

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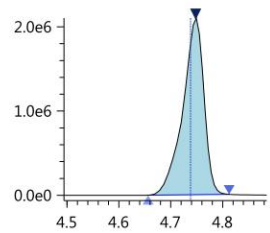
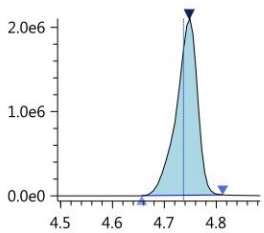
Conc 5.0000
RT 4.748 Area 5913105
ISTD 467.80>423.00 (-) 2.10e6



PFNA-13C
Conc 3.8617
RT 4.748 Area 5913105
Q 467.80>423.00 (-) 2.10e6



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Conc 0.0066
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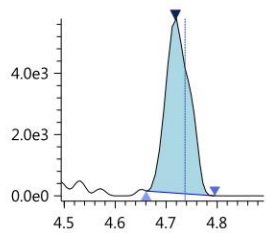
Q 463.00>418.90 (-) 5.79e3



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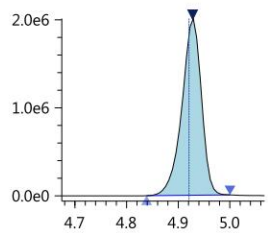
ISTD 514.80>469.95 (-) 2.02e6



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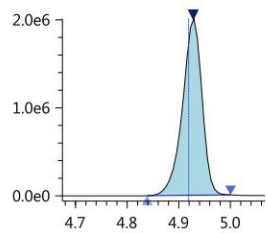

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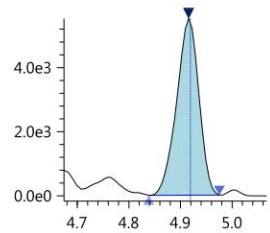

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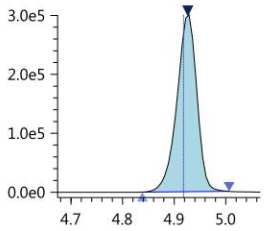
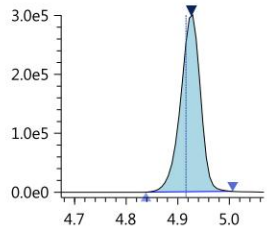
8_2-FTS-13C_IS
Conc 5.0000
RT 4.926 Area 806992
ISTD 528.80>509.00 (-) 3.01e5



8_2-FTS-13C
Conc 4.4968
RT 4.926 Area 806992
Q 528.80>509.00 (-) 3.01e5



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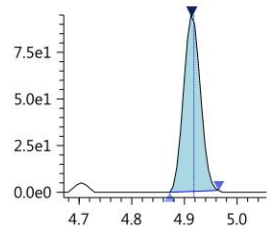
RT 4.914 Area 212
Q 527.10>506.90 (-) 9.50e1



PFDS_1
Conc ----
RT ---- Area ----
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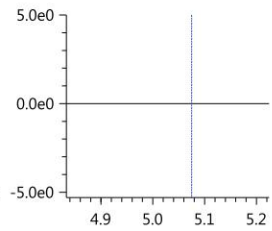

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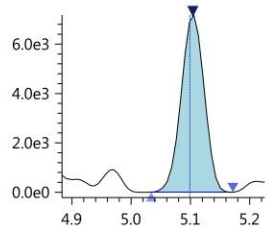

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Conc 5.0000
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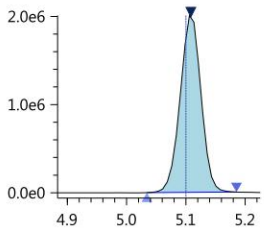
ISTD 564.80>519.95 (-) 2.01e6



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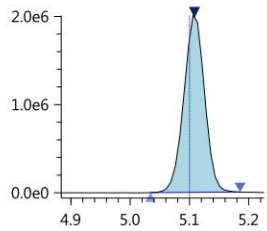
Q 564.80>519.95 (-) 2.01e6



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Conc 0.0062
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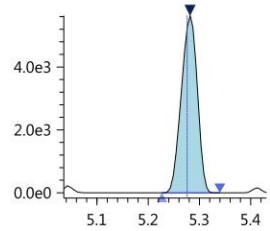
Q 613.05>569.00 (-) 5.64e3



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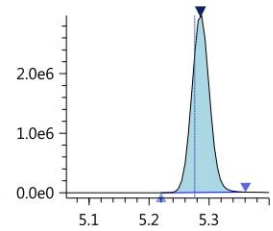
Conc 3.2950
RT 5.286 Area 6237827
Q 614.80>569.95 (-) 2.98e6



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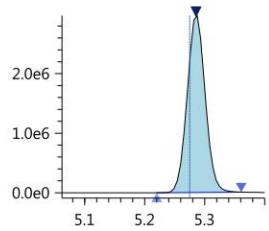
ISTD 614.80>569.95 (-) 2.98e6



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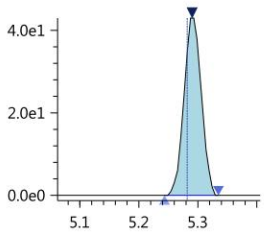
Q 627.00>606.95 (-) 4.30e1



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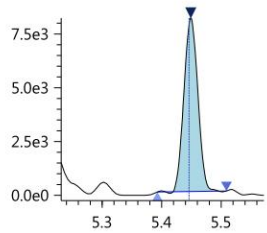
Conc 0.0005
RT 5.449 Area 13168
Q 663.00>618.90 (-) 8.24e3



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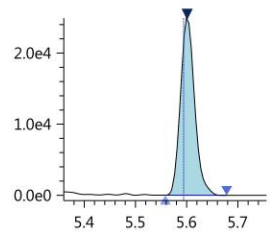
RT 5.601 Area 48445
Q 713.40>669.00 (-) 2.49e4



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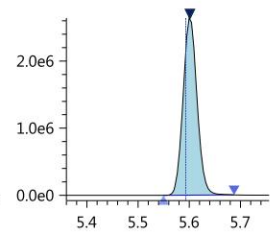
Conc 3.5866
RT 5.601 Area 5027321
Q 714.70>669.90 (-) 2.64e6



PFTeDA-13C_IS
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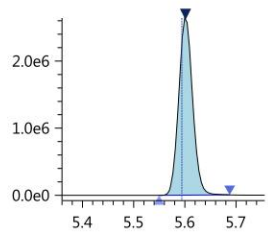

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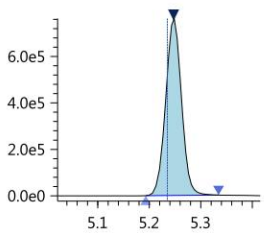
Conc 5.0000
RT 5.247 Area 1626766
ISTD 506.00>78.05 (-) 7.63e5



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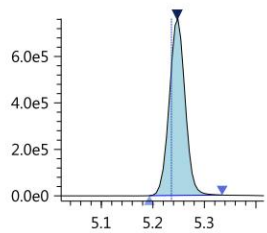
Conc 3.3456
RT 5.247 Area 1626766
Q 506.00>78.05 (-) 7.63e5



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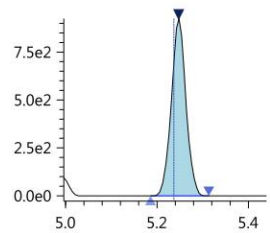
Conc 0.0048
RT 5.247 Area 2051
Q 498.20>78.00 (-) 9.25e2



N-MeFOSAA
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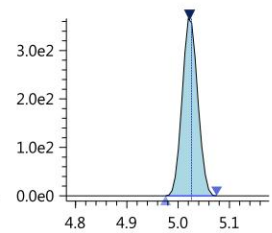
RT 5.022 Area 778
Q 570.20>419.00 (-) 3.66e2



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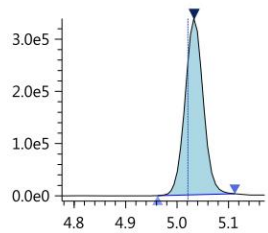
Q 572.80>419.05 (-) 3.40e5



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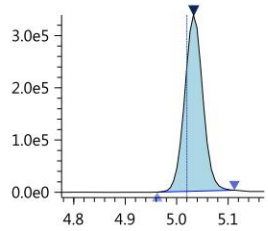
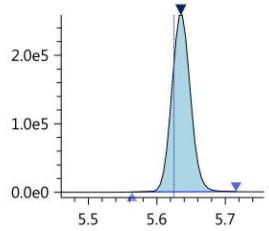
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.033 Area 831687
ISTD 572.80>419.05 (-) 3.40e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.635 Area 498944
ISTD 514.90>168.90 (-) 2.59e5



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Conc 2.8237
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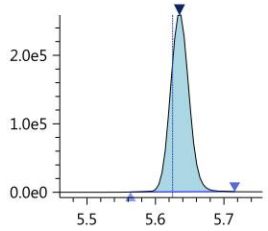
Q 514.90>168.90 (-) 2.59e5



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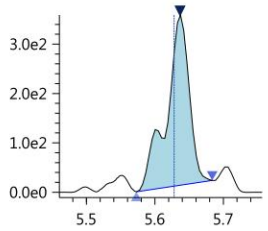
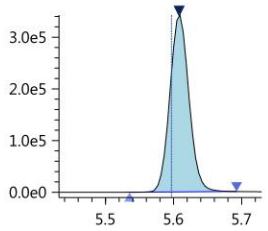
RT 5.637 Area 794
Q 512.00>169.10 (-) 3.59e2



N-MeFOSE-d7
Conc 3.5763
RT 5.608 Area 668258
Q 622.70>59.10 (-) 3.43e5



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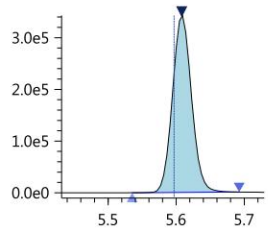
ISTD 622.70>59.10 (-) 3.43e5



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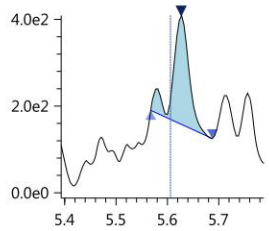
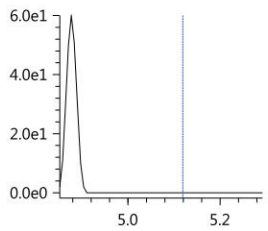
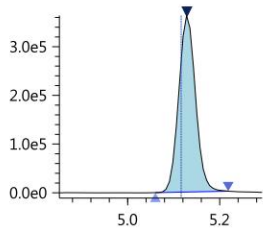
RT 5.627 Area 544
Q 616.00>59.00 (-) 4.09e2



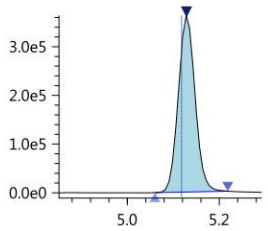
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 6.00e1



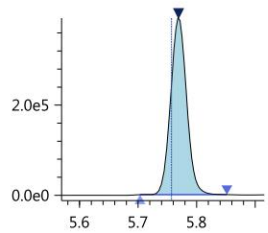
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.129 Area 921841
ISTD 588.80>419.00 (-) 3.64e5



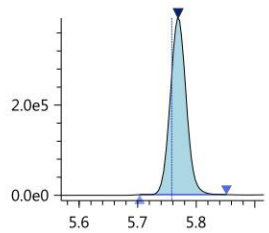
N-EtFOSAA-d5
Conc 2.6042
RT 5.129 Area 921841
Q 588.80>419.00 (-) 3.64e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.769 Area 748132
ISTD 530.90>169.15 (-) 3.93e5



N-EtFOSA-d9
Conc 3.0578
RT 5.769 Area 748132
Q 530.90>169.15 (-) 3.93e5



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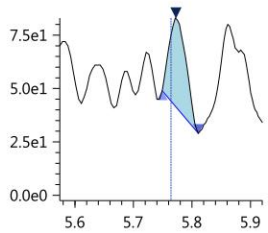
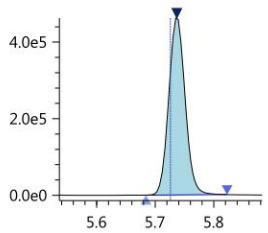
Conc 0.0034
RT 5.772 Area 85
Q 526.90>169.10 (-) 8.30e1



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.737 Area 902426
ISTD 638.70>59.10 (-) 4.63e5



N-EtFOSE-d9
Conc 3.4989
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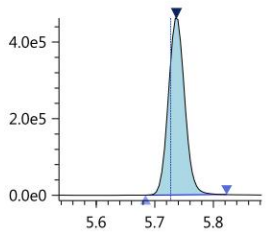
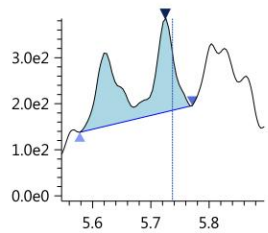
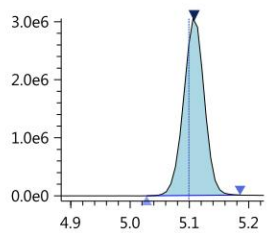
Q 638.70>59.10 (-) 4.63e5



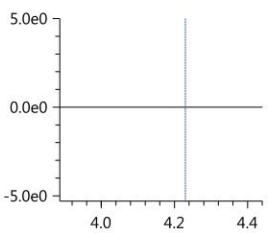
N-EtFOSE
Conc 0.0052
RT 5.725 Area 879
Q 630.00>58.90 (-) 3.85e2



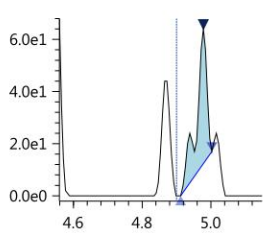
13C7-PFUnDA_IS
Conc 5.0000
RT 5.108 Area 7480871
ISTD 570.00>525.00 (-) 3.05e6



PFPeS
Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 0.00e0



PFNS
Conc 0.0012
RT 4.978 Area 107
Q 549.00>99.00 (-) 6.80e1



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_021
Lab ID: K1902064-005
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 13:26
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_021	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:26	**Vial:**	7
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-005	**Raw Units:**	ng/mL

Bottle ID:	K1902064-005.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.110	0.00	7370766	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.011	0.00	709001	3.6875	74	20 - 109	Y
18O2-PFHxS	4.405	-0.01	504343	3.8134	76	26 - 122	Y
13C4-PFOS	4.734	+0.00	623412	3.9731	79	25 - 121	Y
13C4-PFBA	3.352	0.00	2407387	3.6677	73	27 - 124	Y
13C5-PFPeA	3.962	+0.00	1667333	3.9186	78	27 - 138	Y
13C2-PFHxA	4.229		4832592	3.6831	74	28 - 132	Y
13C4-PFHpA	4.405	-0.01	5390598	3.9945	80	19 - 139	Y
13C4-PFOA	4.579	+0.00	5025409	3.7360	75	22 - 130	Y
13C5-PFNA	4.751	+0.00	5587310	3.7035	74	20 - 127	Y
13C2-PFDA	4.931	+0.00	4855664	3.4118	68	24 - 125	Y
13C2-PFUnDA	5.110	0.00	4104693	3.2054	64	22 - 125	Y
13C2-PFDoDA	5.289	+0.00	5603075	3.0039	60	19 - 122	Y
13C2-PFTeDA	5.603	+0.00	4388239	3.1774	64	13 - 124	Y
13C8-FOSA	5.250	+0.00	1697989	3.5443	71	18 - 109	Y
D3-MeFOSAA	5.036	0.00	787756	2.2533	45	9 - 123	Y
D5-EtFOSAA	5.132		939635	2.6941	54	12 - 126	Y
13C2-6:2 FTS	4.568	+0.00	980979	6.4730	129	10 - 226	Y
13C2-8:2 FTS	4.929	+0.00	847503	4.7931	96	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	49101	0.3227	8.8		Y
Perfluorohexane sulfonic acid (PFHxS)	4.399	-0.01	102197	0.9311	25		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: 3/21/19 10:05
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_021	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:26	**Vial:**	7
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-005	**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)	4.528	-0.04	3315	0.0267	0.72	J	Y
Perfluorooctane sulfonic acid (PFOS)	4.740	+0.01	3103	0.0365	0.99	J	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.351	-0.01	700076	1.5900	43		Y
Perfluoropentanoic acid (PFPeA)	3.962	+0.00	3119751	3.9564	110		Y
Perfluorohexanoic acid (PFHxA)	4.229		3581595	4.1200	110		Y
Perfluoroheptanoic acid (PFHpA)	4.404	-0.01	973772	1.1095	30		Y
Perfluorooctanoic acid (PFOA)	4.575	0.00	205473	0.2228	6.0		Y
Perfluorononanoic acid (PFNA)	4.729	-0.02	20321	0.0098	0.27	U	Y
Perfluorodecanoic acid (PFDA)	4.909	-0.02	17150	0.0216	0.59	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.087	-0.03	19652	-0.0092	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.264	-0.02	13060	0.0092	0.25	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.438	-0.02	13813	0.0035	0.095	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.604	+0.00	44789	0.0083	0.23	U	Y
Perfluorooctane sulfonamide (FOSA)	5.252	+0.01	1917	0.0043	0.12	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.036	-0.01	1173	0.0121	0.33	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.569	+0.00	23213	0.1119	3.0	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0		0	0	0	U	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

Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_021

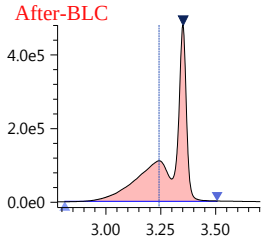
Sample ID: K1902064-005
Date acquired: 3/19/2019 1:26:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_021.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.352	2324601	2324601	2	5.0000	ng/mL	----
PFBA-13C	M	3.352	2407387	7370766	26	3.6677	ng/mL	----
PFBA	Auto	3.351	700076	2324601	2	1.5900	ng/mL	----
PFPeA-13C_IS	Auto	3.962	1667333	1667333	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.962	1667333	7370766	26	3.9186	ng/mL	----
PFPeA	Auto	3.962	3119751	1667333	4	3.9564	ng/mL	----
PFBS_1	Auto	4.006	49101	709001	16	0.3227	ng/mL	----
PFBS-13C	Auto	4.011	709001	7370766	26	3.6875	ng/mL	----
PFBS-13C_IS	Auto	4.011	709001	709001	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.229	4832592	4832592	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.229	4832592	7370766	26	3.6831	ng/mL	----
PFHxA	Auto	4.229	3581595	4832592	6	4.1200	ng/mL	----
PFHpA	Auto	4.404	973772	5390598	8	1.1095	ng/mL	----
PFHpA-13C_IS	Auto	4.405	5390598	5390598	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.405	5390598	7370766	26	3.9945	ng/mL	----
PFHxS-18O_IS	Auto	4.405	504343	504343	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.405	504343	7370766	26	3.8134	ng/mL	----
PFHxS_1	Auto	4.399	102197	504343	7	0.9311	ng/mL	----
6_2-FTS-13C	Auto	4.568	980979	7370766	26	6.4730	ng/mL	----
6_2-FTS-13C_IS	Auto	4.568	980979	980979	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.569	23213	980979	10	0.1119	ng/mL	----
PFHpS_1	M	4.528	3315	504343	7	0.0267	ng/mL	----
PFOA-13C_IS	Auto	4.579	5025409	5025409	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.579	5025409	7370766	26	3.7360	ng/mL	----
PFOA	Auto	4.575	205473	5025409	9	0.2228	ng/mL	----
PFOS_1	M	4.740	3103	623412	13	0.0365	ng/mL	----
PFOS-13C_IS	Auto	4.734	623412	623412	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.734	623412	7370766	26	3.9731	ng/mL	----
PFNA-13C_IS	Auto	4.751	5587310	5587310	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.751	5587310	7370766	26	3.7035	ng/mL	----
PFNA	Auto	4.729	20321	5587310	11	0.0098	ng/mL	----
PFDA-13C_IS	Auto	4.931	4855664	4855664	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.931	4855664	7370766	26	3.4118	ng/mL	----
PFDA	Auto	4.909	17150	4855664	12	0.0216	ng/mL	----
8_2-FTS-13C_IS	Auto	4.929	847503	847503	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.929	847503	7370766	26	4.7931	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	847503	15	----	ng/mL	----
PFUnA	Auto	5.087	19652	4104693	14	-0.0092	ng/mL	----
PFUnA-13C_IS	Auto	5.110	4104693	4104693	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.110	4104693	7370766	26	3.2054	ng/mL	----
PFDoA	Auto	5.264	13060	5603075	17	0.0092	ng/mL	----
PFDoA-13C	Auto	5.289	5603075	7370766	26	3.0039	ng/mL	----
PFDoA-13C_IS	Auto	5.289	5603075	5603075	17	5.0000	ng/mL	----
PFTrDA	Auto	5.438	13813	4388239	22	0.0035	ng/mL	----
PFTeDA	Auto	5.604	44789	4388239	22	0.0083	ng/mL	----
PFTeDA-13C	Auto	5.603	4388239	7370766	26	3.1774	ng/mL	----
PFTeDA-13C_IS	Auto	5.603	4388239	4388239	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.250	1697989	1697989	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.250	1697989	7370766	26	3.5443	ng/mL	----
FOSA	M	5.252	1917	1697989	18	0.0043	ng/mL	----
N-MeFOSAA	M	5.036	1173	787756	19	0.0121	ng/mL	----
N-MeFOSAA-d3	Auto	5.036	787756	7370766	26	2.2533	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.036	787756	787756	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	939635	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.132	939635	939635	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.132	939635	7370766	26	2.6941	ng/mL	----
13C7-PFUnDA_IS	Auto	5.110	7370766	7370766	26	5.0000	ng/mL	----

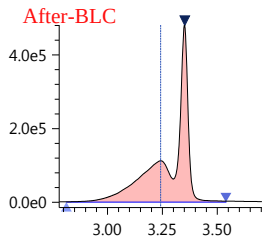
Insight Report

Printed at 3/21/2019 9:48:23 AM

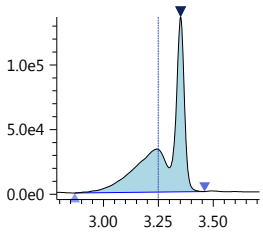
PFBA-13C_IS
Conc 5.0000
RT 3.352 Area 2324601
ISTD 216.90>172.15 (-) 4.81e5



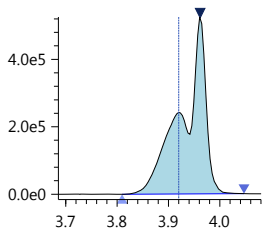
PFBA-13C
Conc 3.6677
RT 3.352 Area 2407387
Q 216.90>172.15 (-) 4.81e5



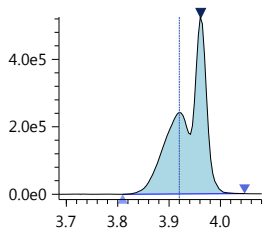
PFBA
Conc 1.5900
RT 3.351 Area 700076
Q 213.00>169.10 (-) 1.37e5



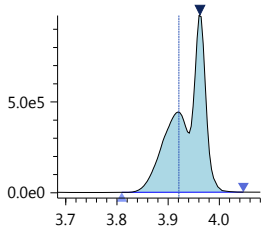
PFPeA-13C_IS
Conc 5.0000
RT 3.962 Area 1667333
ISTD 267.90>223.00 (-) 5.25e5



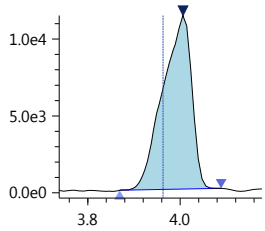
PFPeA-13C
Conc 3.9186
RT 3.962 Area 1667333
Q 267.90>223.00 (-) 5.25e5



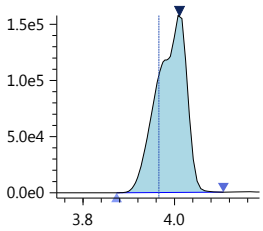
PFPeA
Conc 3.9564
RT 3.962 Area 3119751
Q 263.05>219.10 (-) 9.76e5



PFBS_1
Conc 0.3227
RT 4.006 Area 49101
Q 299.00>80.00 (-) 1.15e4



PFBS-13C
Conc 3.6875
RT 4.011 Area 709001
Q 301.80>80.00 (-) 1.58e5



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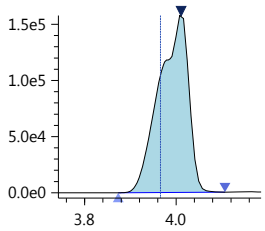
Conc 5.0000
RT 4.011 Area 709001
ISTD 301.80>80.00 (-) 1.58e5



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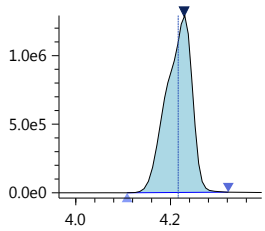
Conc 5.0000
RT 4.229 Area 4832592
ISTD 314.90>270.10 (-) 1.29e6



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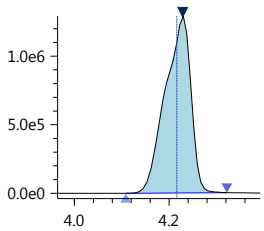
RT 4.229 Area 4832592
Q 314.90>270.10 (-) 1.29e6



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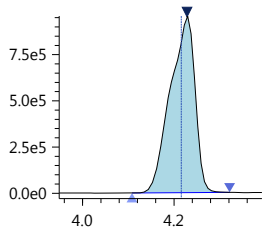
Conc 4.1200
RT 4.229 Area 3581595
Q 313.00>269.00 (-) 9.59e5



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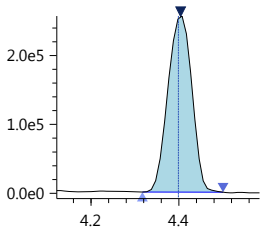
Conc 1.1095
RT 4.404 Area 973772
Q 362.90>319.00 (-) 2.57e5



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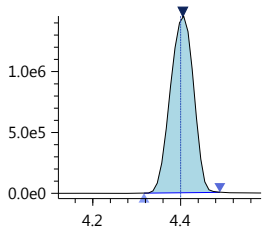
Conc 5.0000
RT 4.405 Area 5390598
ISTD 366.90>322.10 (-) 1.46e6



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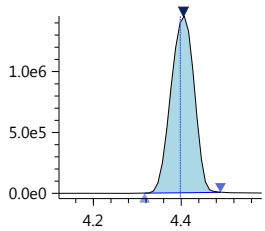
Conc 3.9945
RT 4.405 Area 5390598
Q 366.90>322.10 (-) 1.46e6



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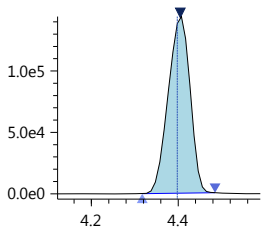
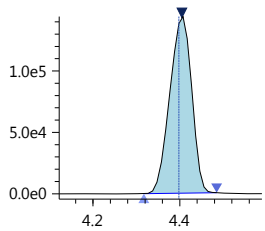
Conc 5.0000
RT 4.405 Area 504343
ISTD 402.70>84.05 (-) 1.44e5



PFHxS-18O
Conc 3.8134
RT 4.405 Area 504343
Q 402.70>84.05 (-) 1.44e5



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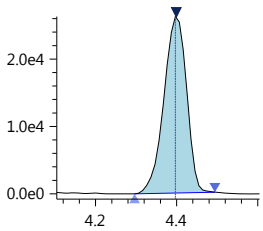
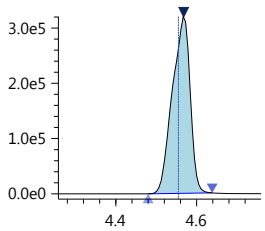
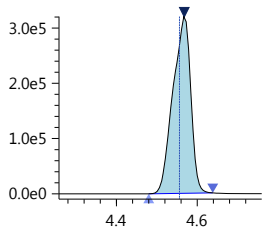
Conc 0.9311
RT 4.399 Area 102197
Q 399.00>80.00 (-) 2.63e4



6_2-FTS-13C
Conc 6.4730
RT 4.568 Area 980979
Q 428.90>409.00 (-) 3.21e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.568 Area 980979
ISTD 428.90>409.00 (-) 3.21e5



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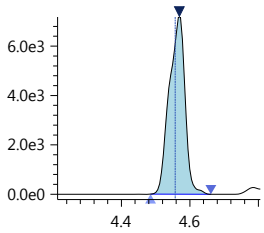
6_2-FTS_1
Conc 0.1119
RT 4.569 Area 23213
Q 427.00>407.00 (-) 7.18e3



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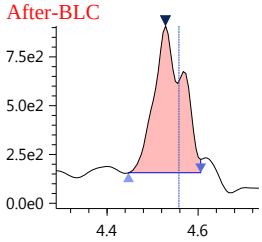
Conc 0.0267
RT 4.528 Area 3315
Q 449.00>80.15 (-) 9.08e2



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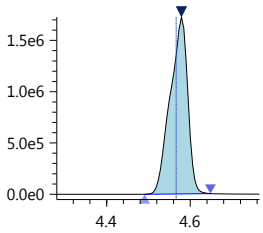
RT 4.579 Area 5025409
ISTD 416.80>372.05 (-) 1.73e6



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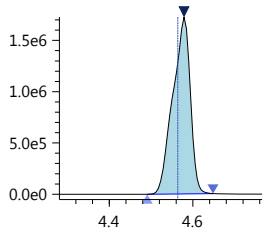
Q 416.80>372.05 (-) 1.73e6



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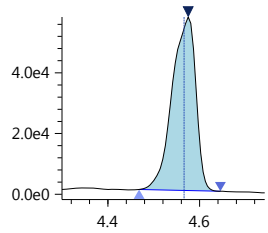
Q 413.00>369.00 (-) 5.84e4



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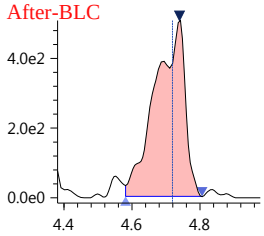
Conc 0.0365
RT 4.740 Area 3103
Q 499.00>80.00 (-) 5.09e2



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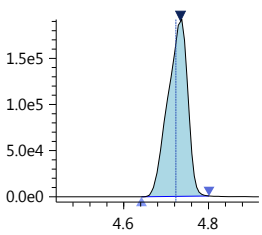
Conc 5.0000
RT 4.734 Area 623412
ISTD 502.80>80.05 (-) 1.92e5



PFOS-13C
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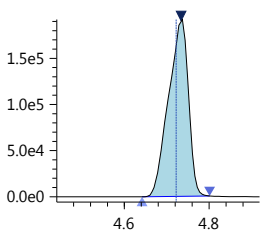
RT 4.734 Area 623412
Q 502.80>80.05 (-) 1.92e5



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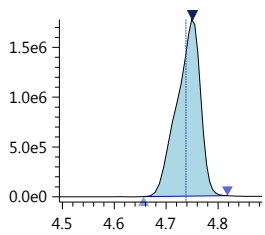
Conc 5.0000
RT 4.751 Area 5587310
ISTD 467.80>423.00 (-) 1.78e6



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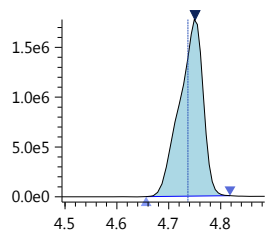
Conc 3.7035
RT 4.751 Area 5587310
Q 467.80>423.00 (-) 1.78e6



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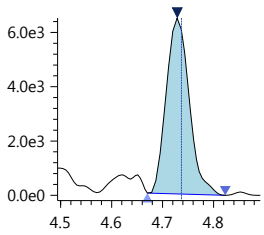
Conc 0.0098
RT 4.729 Area 20321
Q 463.00>418.90 (-) 6.53e3



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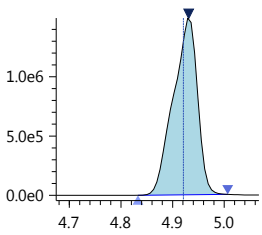
ISTD 514.80>469.95 (-) 1.50e6



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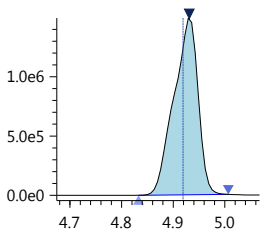
Q 514.80>469.95 (-) 1.50e6



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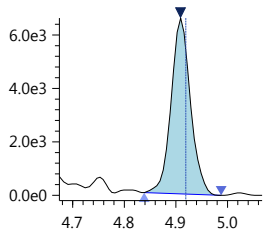
Conc 0.0216
RT 4.909 Area 17150
Q 513.00>468.80 (-) 6.63e3



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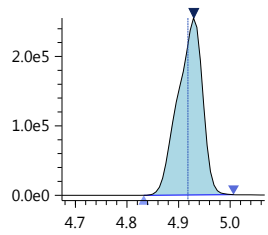
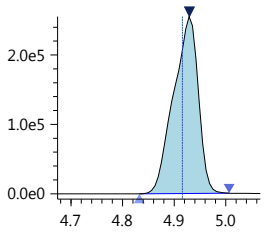
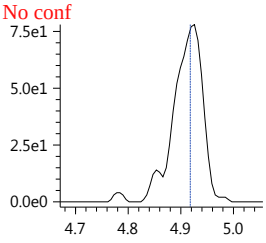
Conc 5.0000
RT 4.929 Area 847503
ISTD 528.80>509.00 (-) 2.55e5



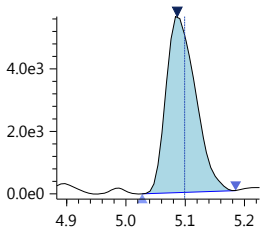
8_2-FTS-13C
Conc 4.7931
RT 4.929 Area 847503
Q 528.80>509.00 (-) 2.55e5



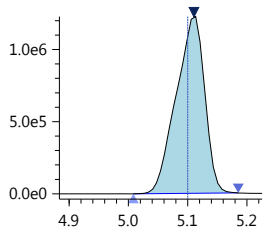
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 7.80e1



PFUnA
Conc -0.0092
RT 5.087 Area 19652
Q 563.00>518.90 (-) 5.68e3



PFUnA-13C_IS
Conc 5.0000
RT 5.110 Area 4104693
ISTD 564.80>519.95 (-) 1.23e6



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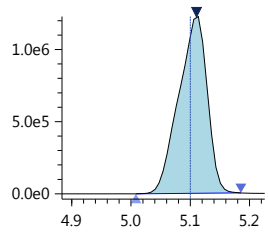
Q 564.80>519.95 (-) 1.23e6



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PFDoA
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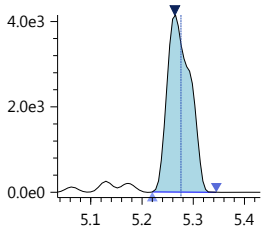
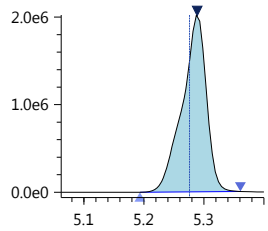
RT 5.264 Area 13060
Q 613.05>569.00 (-) 4.15e3



PFDoA-13C
Conc 3.0039
RT 5.289 Area 5603075
Q 614.80>569.95 (-) 2.02e6



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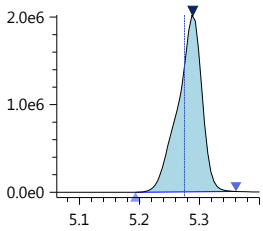
Conc 5.0000
RT 5.289 Area 5603075
ISTD 614.80>569.95 (-) 2.02e6



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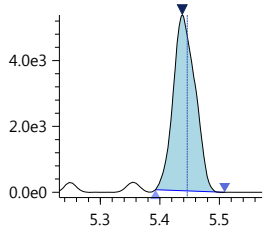
Conc 0.0035
RT 5.438 Area 13813
Q 663.00>618.90 (-) 5.38e3



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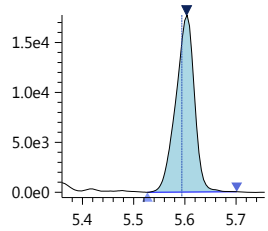
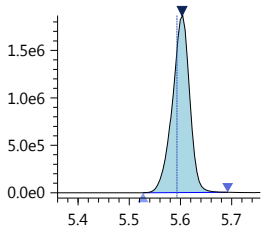
Conc 0.0083
RT 5.604 Area 44789
Q 713.40>669.00 (-) 1.78e4



PFTeDA-13C
Conc 3.1774
RT 5.603 Area 4388239
Q 714.70>669.90 (-) 1.87e6



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Conc 5.0000
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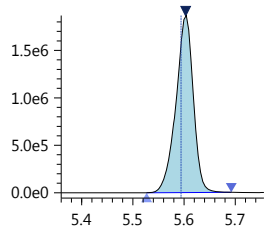
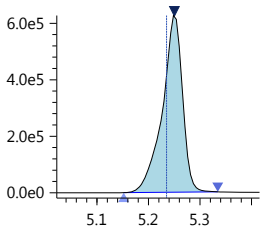
ISTD 714.70>669.90 (-) 1.87e6



FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 1697989
ISTD 506.00>78.05 (-) 6.27e5



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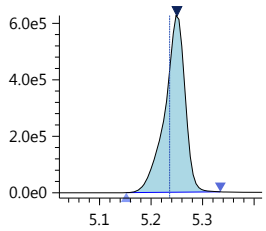
Conc 3.5443
RT 5.250 Area 1697989
Q 506.00>78.05 (-) 6.27e5



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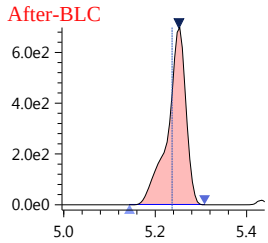
RT 5.252 Area 1917
Q 498.20>78.00 (-) 6.98e2



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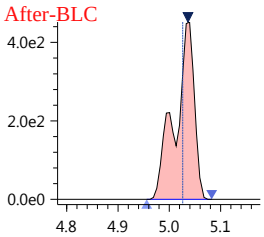
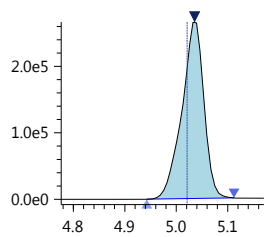
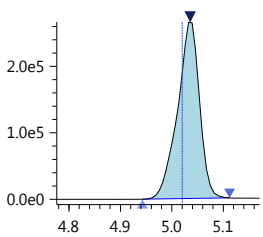
RT 5.036 Area 1173
Q 570.20>419.00 (-) 4.52e2



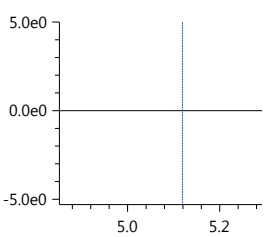
N-MeFOSAA-d3
Conc 2.2533
RT 5.036 Area 787756
Q 572.80>419.05 (-) 2.67e5



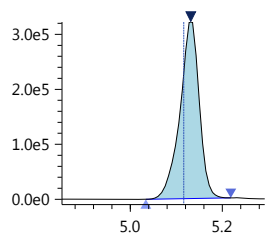
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.036 Area 787756
ISTD 572.80>419.05 (-) 2.67e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.132 Area 939635
ISTD 588.80>419.00 (-) 3.22e5



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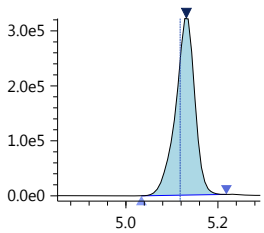
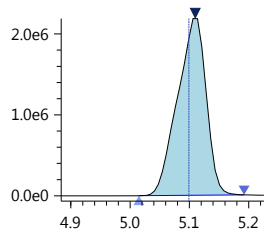
Conc 2.6941
RT 5.132 Area 939635
Q 588.80>419.00 (-) 3.22e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.110 Area 7370766
ISTD 570.00>525.00 (-) 2.19e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_021

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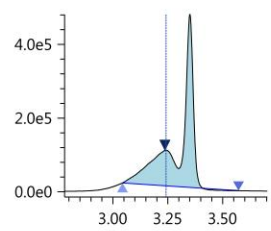
Date acquired: 3/19/2019 1:26:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_021.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 2

PFBA-13C_IS
Conc 5.0000
RT 3.236 Area 1913766
ISTD 216.90>172.15 (-) 4.81e5



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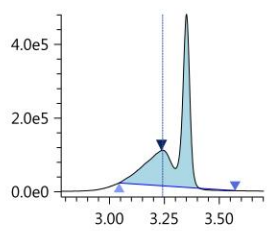

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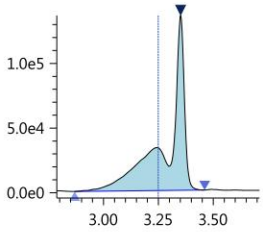
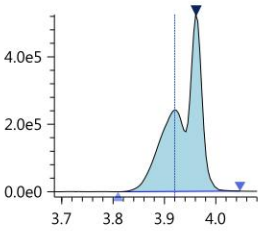
Conc 1.9314
RT 3.351 Area 700076
Q 213.00>169.10 (-) 1.37e5



PFPeA-13C_IS
Conc 5.0000
RT 3.962 Area 1667333
ISTD 267.90>223.00 (-) 5.25e5



PFPeA-13C
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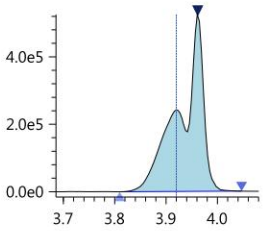
Q 267.90>223.00 (-) 5.25e5



PFPeA
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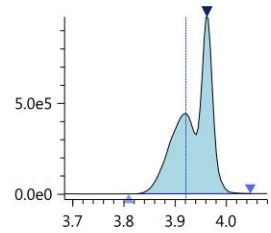
RT 3.962 Area 3119751
Q 263.05>219.10 (-) 9.76e5



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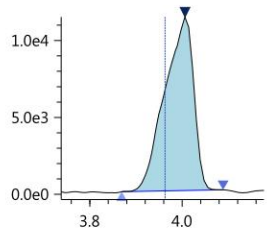
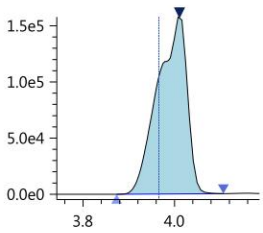
Conc 0.3227
RT 4.006 Area 49101
Q 299.00>80.00 (-) 1.15e4



PFBS-13C
Conc 3.6875
RT 4.011 Area 709001
Q 301.80>80.00 (-) 1.58e5



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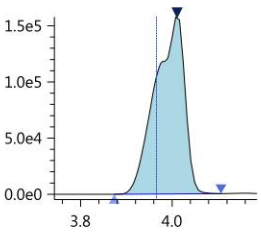

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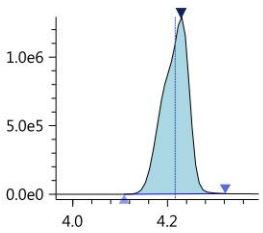
RT 4.229 Area 4832592
ISTD 314.90>270.10 (-) 1.29e6



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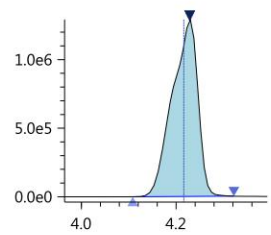

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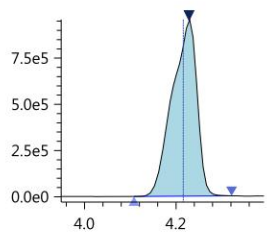
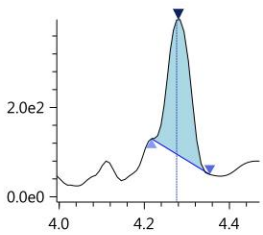
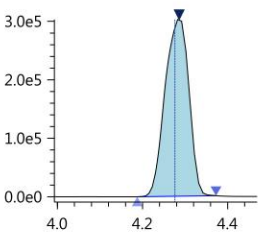
Conc 4.1200
RT 4.229 Area 3581595
Q 313.00>269.00 (-) 9.59e5



HPFO_DA
Conc 0.0043
RT 4.280 Area 1082
Q 329.00>169.00 (-) 3.97e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.286 Area 1184673
ISTD 332.00>286.80 (-) 3.03e5



HFPO_DA-13C
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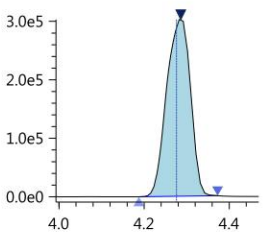
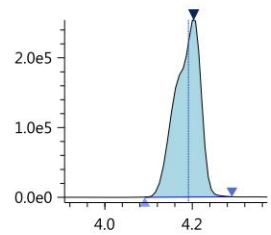


4_2-FTS-13C_IS
Conc 5.0000
RT 4.203 Area 1015718
ISTD 328.80>309.05 (-) 2.54e5



4_2-FTS-13C
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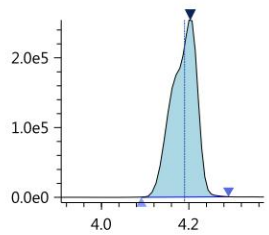
Q 328.80>309.05 (-) 2.54e5



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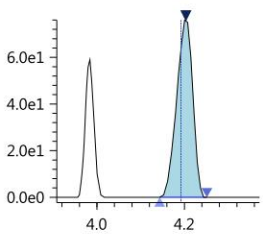
Q 327.00>307.05 (-) 7.60e1



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Conc 1.1095
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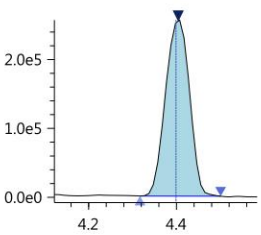
Q 362.90>319.00 (-) 2.57e5



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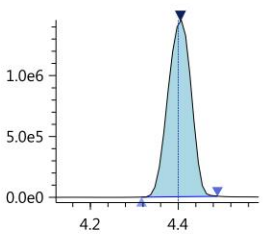
Conc 5.0000
RT 4.405 Area 5390598
ISTD 366.90>322.10 (-) 1.46e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

PFHpA-13C
Conc 3.9945
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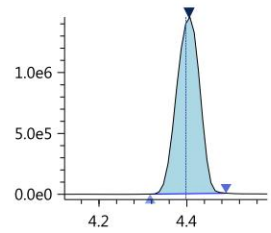
Q 366.90>322.10 (-) 1.46e6



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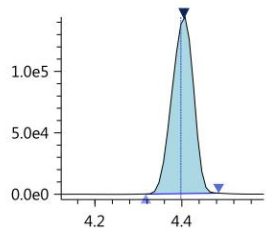
RT 4.405 Area 504343
ISTD 402.70>84.05 (-) 1.44e5



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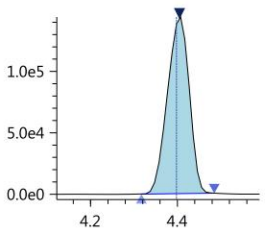

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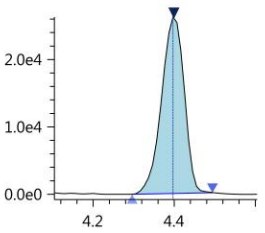
Conc 0.9311
RT 4.399 Area 102197
Q 399.00>80.00 (-) 2.63e4



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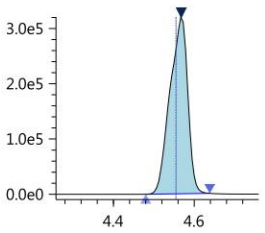
Conc 6.4730
RT 4.568 Area 980979
Q 428.90>409.00 (-) 3.21e5



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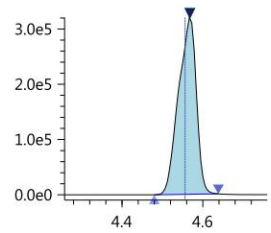
ISTD 428.90>409.00 (-) 3.21e5



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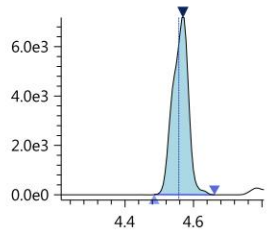
RT 4.569 Area 23213
Q 427.00>407.00 (-) 7.18e3



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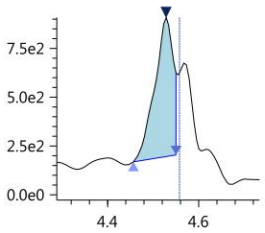
Q 449.00>80.15 (-) 9.08e2



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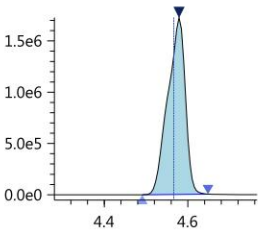
ISTD 416.80>372.05 (-) 1.73e6



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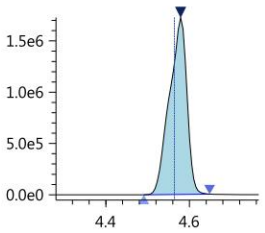
Q 416.80>372.05 (-) 1.73e6



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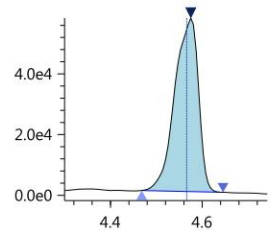

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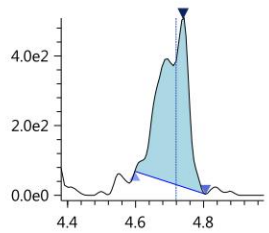
RT 4.740 Area 2660
Q 499.00>80.00 (-) 5.09e2



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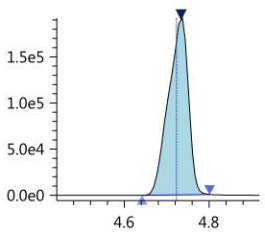
ISTD 502.80>80.05 (-) 1.92e5



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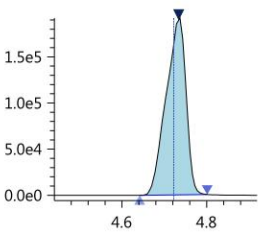
Q 502.80>80.05 (-) 1.92e5



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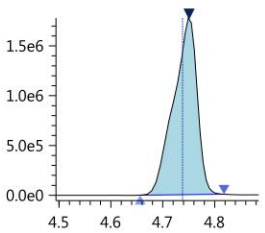
Conc 5.0000
RT 4.751 Area 5587310
ISTD 467.80>423.00 (-) 1.78e6



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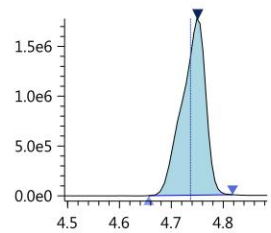
RT 4.751 Area 5587310
Q 467.80>423.00 (-) 1.78e6



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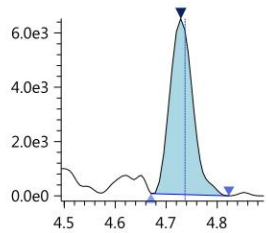
Conc 0.0098
RT 4.729 Area 20321
Q 463.00>418.90 (-) 6.53e3



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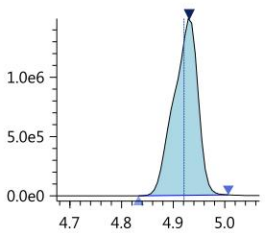
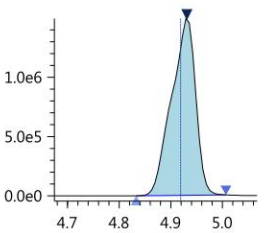
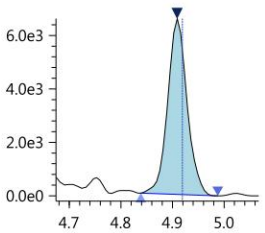


PFDA-13C
Conc 3.4118
RT 4.931 Area 4855664
Q 514.80>469.95 (-) 1.50e6



PFDA
Conc 0.0216
RT 4.909 Area 17150
Q 513.00>468.80 (-) 6.63e3



Insight Report

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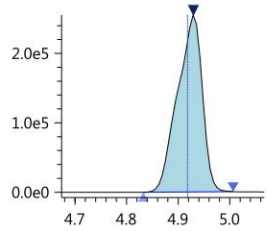
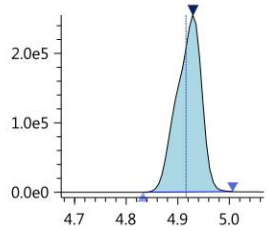
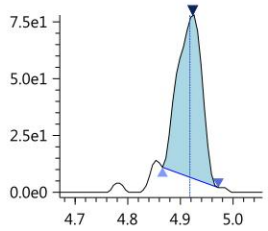
8_2-FTS-13C_IS
Conc 5.0000
RT 4.929 Area 847503
ISTD 528.80>509.00 (-) 2.55e5



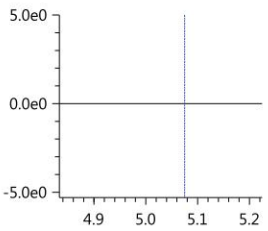
8_2-FTS-13C
Conc 4.7931
RT 4.929 Area 847503
Q 528.80>509.00 (-) 2.55e5



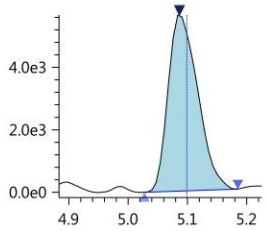
8_2-FTS_1
Conc 0.0014
RT 4.923 Area 232
Q 527.10>506.90 (-) 7.80e1



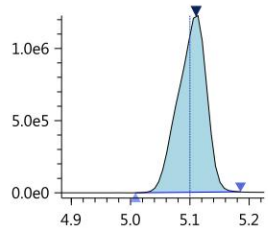
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc -0.0092
RT 5.087 Area 19652
Q 563.00>518.90 (-) 5.68e3



PFUnA-13C_IS
Conc 5.0000
RT 5.110 Area 4104693
ISTD 564.80>519.95 (-) 1.23e6



PFUnA-13C
Conc 3.2054
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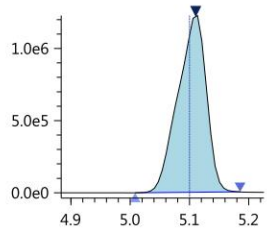
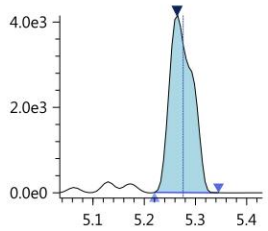
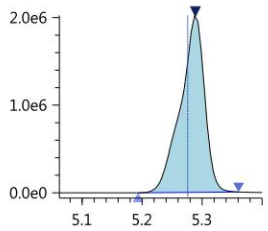
Q 564.80>519.95 (-) 1.23e6



PFDoA
Conc 0.0092
RT 5.264 Area 13060
Q 613.05>569.00 (-) 4.15e3



PFDoA-13C
Conc 3.0039
RT 5.289 Area 5603075
Q 614.80>569.95 (-) 2.02e6



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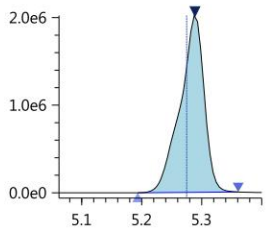
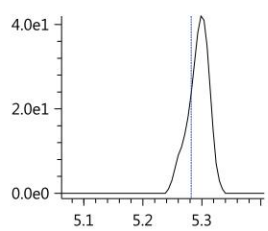
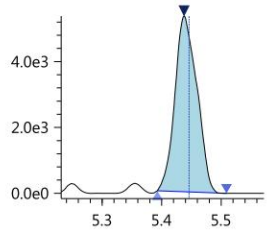
Conc 5.0000
RT 5.289 Area 5603075
ISTD 614.80>569.95 (-) 2.02e6



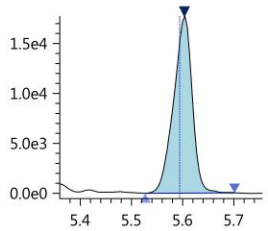
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 4.20e1



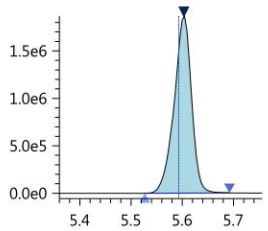
PFTrDA
Conc 0.0035
RT 5.438 Area 13813
Q 663.00>618.90 (-) 5.38e3



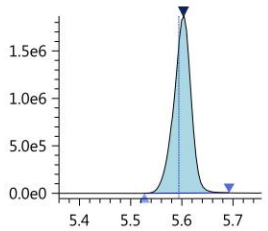
PFTeDA
Conc 0.0083
RT 5.604 Area 44789
Q 713.40>669.00 (-) 1.78e4



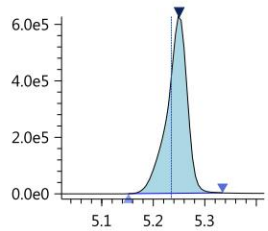
PFTeDA-13C
Conc 3.1774
RT 5.603 Area 4388239
Q 714.70>669.90 (-) 1.87e6



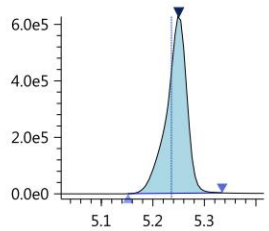
PFTeDA-13C_IS
Conc 5.0000
RT 5.603 Area 4388239
ISTD 714.70>669.90 (-) 1.87e6



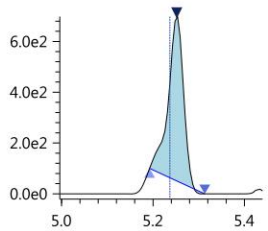
FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 1697989
ISTD 506.00>78.05 (-) 6.27e5



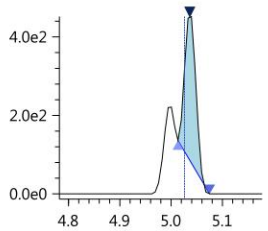
FOSA-13C
Conc 3.5443
RT 5.250 Area 1697989
Q 506.00>78.05 (-) 6.27e5



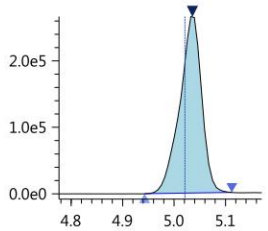
FOSA
Conc 0.0033
RT 5.252 Area 1493
Q 498.20>78.00 (-) 6.98e2



N-MeFOSAA
Conc 0.0058
RT 5.036 Area 560
Q 570.20>419.00 (-) 4.52e2



N-MeFOSAA-d3
Conc 2.2533
RT 5.036 Area 787756
Q 572.80>419.05 (-) 2.67e5



Insight Report

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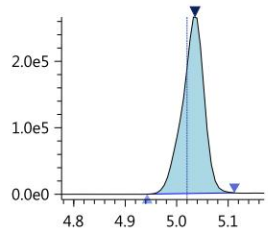
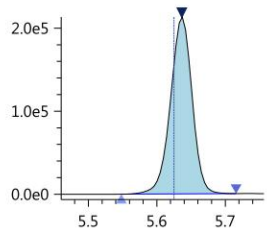
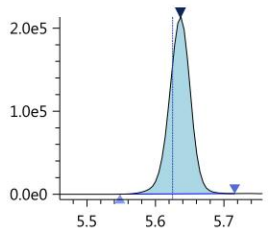
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.036 Area 787756
ISTD 572.80>419.05 (-) 2.67e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.636 Area 468847
ISTD 514.90>168.90 (-) 2.13e5



N-MeFOSA-d3
Conc 2.6930
RT 5.636 Area 468847
Q 514.90>168.90 (-) 2.13e5



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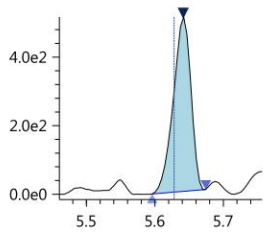
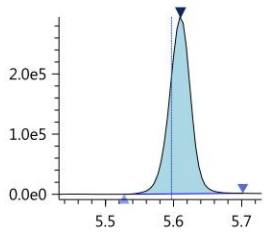
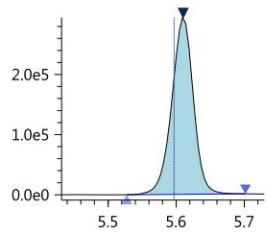
Conc 0.0082
RT 5.641 Area 909
Q 512.00>169.10 (-) 5.17e2



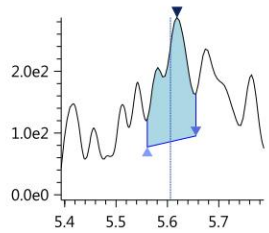
N-MeFOSE-d7
Conc 3.5452
RT 5.610 Area 652700
Q 622.70>59.10 (-) 2.95e5



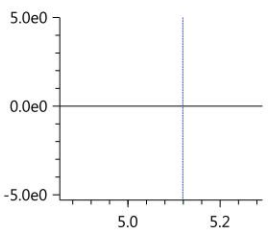
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.610 Area 652700
ISTD 622.70>59.10 (-) 2.95e5



N-MeFOSE
Conc 0.0042
RT 5.619 Area 716
Q 616.00>59.00 (-) 2.87e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
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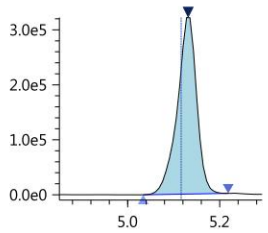
ISTD 588.80>419.00 (-) 3.22e5



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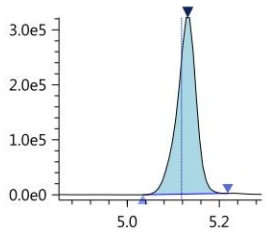
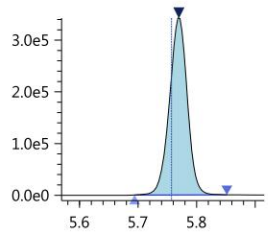
Conc 2.6941
RT 5.132 Area 939635
Q 588.80>419.00 (-) 3.22e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.770 Area 729793
ISTD 530.90>169.15 (-) 3.43e5



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Conc 3.0274
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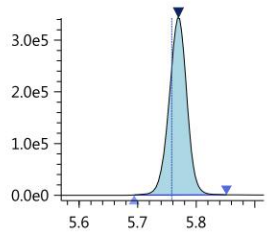
Q 530.90>169.15 (-) 3.43e5



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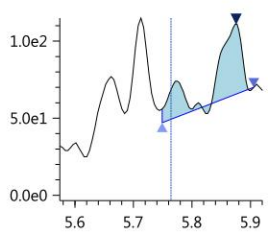
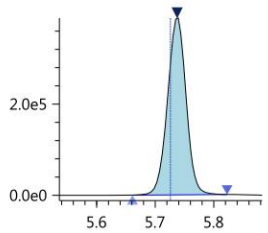
Conc 0.0062
RT 5.875 Area 150
Q 526.90>169.10 (-) 1.15e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.737 Area 858700
ISTD 638.70>59.10 (-) 3.89e5



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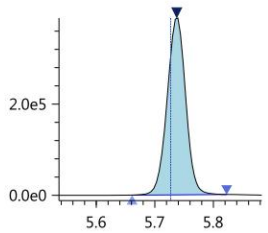
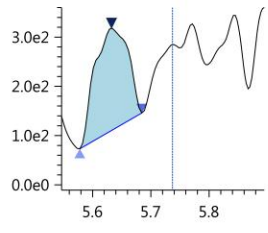
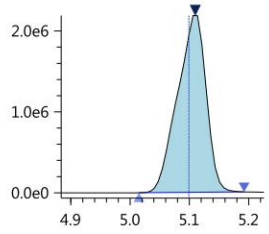
Conc 3.3791
RT 5.737 Area 858700
Q 638.70>59.10 (-) 3.89e5



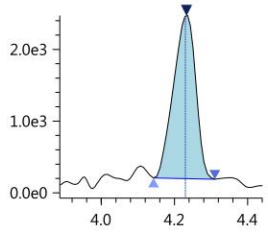
N-EtFOSE
Conc 0.0051
RT 5.633 Area 825
Q 630.00>58.90 (-) 3.60e2



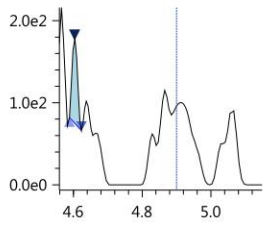
13C7-PFUnDA_IS
Conc 5.0000
RT 5.110 Area 7370766
ISTD 570.00>525.00 (-) 2.19e6



PFPeS
Conc 0.1052
RT 4.233 Area 9655
Q 349.00>99.00 (-) 2.47e3



PFNS
Conc 0.0013
RT 4.603 Area 112
Q 549.00>99.00 (-) 2.16e2



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_022
Lab ID: K1902064-006
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 13:37
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_022	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:37	**Vial:**	8
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-006	**Raw Units:**	ng/mL

Bottle ID:	K1902064-006.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.108	-0.01	8072864	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.005	-0.01	694494	3.2979	66	20 - 109	Y
18O2-PFHxS	4.401	-0.01	504498	3.4828	70	26 - 122	Y
13C4-PFOS	4.730	0.00	671299	3.9062	78	25 - 121	Y
13C4-PFBA	3.343	-0.01	2485451	3.4573	69	27 - 124	Y
13C5-PFPeA	3.954	-0.01	1715543	3.6813	74	27 - 138	Y
13C2-PFHxA	4.224	-0.01	5073706	3.5305	71	28 - 132	Y
13C4-PFHpA	4.405	-0.01	5884675	3.9814	80	19 - 139	Y
13C4-PFOA	4.573	0.00	5152089	3.4971	70	22 - 130	Y
13C5-PFNA	4.747	0.00	5772029	3.4932	70	20 - 127	Y
13C2-PFDA	4.929	0.00	5162304	3.3118	66	24 - 125	Y
13C2-PFUnDA	5.108	-0.01	4609445	3.2865	66	22 - 125	Y
13C2-PFDoDA	5.285	0.00	5877880	2.8772	58	19 - 122	Y
13C2-PFTeDA	5.603	+0.00	4820699	3.1870	64	13 - 124	Y
13C8-FOSA	5.247	+0.00	1705952	3.2512	65	18 - 109	Y
D3-MeFOSAA	5.033	-0.01	835716	2.1825	44	9 - 123	Y
D5-EtFOSAA	5.129	0.00	913918	2.3925	48	12 - 126	Y
13C2-6:2 FTS	4.563	0.00	831286	5.0082	100	10 - 226	Y
13C2-8:2 FTS	4.927	0.00	799211	4.1269	83	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)	4.000	-0.01	21724	0.1458	3.8	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.398	-0.01	144508	1.3162	35		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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_022	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:37	**Vial:**	8
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-006	**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	-0.01	9179	0.0740	1.9	J	Y
Perfluorooctane sulfonic acid (PFOS)	4.730	0.00	419352	4.5854	120		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.344	-0.01	72896	0.1601	4.2		Y
Perfluoropentanoic acid (PFPeA)	3.954	-0.01	192821	0.1185	3.1	J	Y
Perfluorohexanoic acid (PFHxA)	4.222	-0.01	236491	0.2262	5.9	U	Y
Perfluoroheptanoic acid (PFHpA)	4.402	-0.01	165806	0.1394	3.7	J	Y
Perfluorooctanoic acid (PFOA)	4.571	-0.01	316399	0.3473	9.1		Y
Perfluorononanoic acid (PFNA)	4.727	-0.02	29956	0.0212	0.56	U	Y
Perfluorodecanoic acid (PFDA)	4.907	-0.02	18180	0.0216	0.57	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.086	-0.03	20905	-0.0109	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.272	-0.02	17265	0.0143	0.38	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.449	-0.01	13906	0.0020	0.052	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.603	+0.00	49507	0.0092	0.24	U	Y
Perfluorooctane sulfonamide (FOSA)	5.252	+0.01	1406	0.0031	0.081	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.037	0.00	298	0.0029	0.076	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.564	0.00	25118	0.1429	3.7	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.924	0.00	255	0.0017	0.045	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 3/21/2019 9:48:23 AM

190319_022

Sample ID: K1902064-006
Date acquired: 3/19/2019 1:37:17 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_022.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.343	2403367	2403367	2	5.0000	ng/mL	----
PFBA-13C	M	3.343	2485451	8072864	26	3.4573	ng/mL	----
PFBA	Auto	3.344	72896	2403367	2	0.1601	ng/mL	----
PFPeA-13C_IS	Auto	3.954	1715543	1715543	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.954	1715543	8072864	26	3.6813	ng/mL	----
PFPeA	Auto	3.954	192821	1715543	4	0.1185	ng/mL	----
PFBS_1	Auto	4.000	21724	694494	16	0.1458	ng/mL	----
PFBS-13C	Auto	4.005	694494	8072864	26	3.2979	ng/mL	----
PFBS-13C_IS	Auto	4.005	694494	694494	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.224	5073706	5073706	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.224	5073706	8072864	26	3.5305	ng/mL	----
PFHxA	Auto	4.222	236491	5073706	6	0.2262	ng/mL	----
PFHpA	Auto	4.402	165806	5884675	8	0.1394	ng/mL	----
PFHpA-13C_IS	Auto	4.405	5884675	5884675	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.405	5884675	8072864	26	3.9814	ng/mL	----
PFHxS-18O_IS	Auto	4.401	504498	504498	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.401	504498	8072864	26	3.4828	ng/mL	----
PFHxS_1	Auto	4.398	144508	504498	7	1.3162	ng/mL	----
6_2-FTS-13C	Auto	4.563	831286	8072864	26	5.0082	ng/mL	----
6_2-FTS-13C_IS	Auto	4.563	831286	831286	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.564	25118	831286	10	0.1429	ng/mL	----
PFHpS_1	M	4.562	9179	504498	7	0.0740	ng/mL	----
PFOA-13C_IS	Auto	4.573	5152089	5152089	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.573	5152089	8072864	26	3.4971	ng/mL	----
PFOA	Auto	4.571	316399	5152089	9	0.3473	ng/mL	----
PFOS_1	Auto	4.730	419352	671299	13	4.5854	ng/mL	----
PFOS-13C_IS	Auto	4.730	671299	671299	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.730	671299	8072864	26	3.9062	ng/mL	----
PFNA-13C_IS	Auto	4.747	5772029	5772029	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.747	5772029	8072864	26	3.4932	ng/mL	----
PFNA	Auto	4.727	29956	5772029	11	0.0212	ng/mL	----
PFDA-13C_IS	Auto	4.929	5162304	5162304	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.929	5162304	8072864	26	3.3118	ng/mL	----
PFDA	Auto	4.907	18180	5162304	12	0.0216	ng/mL	----
8_2-FTS-13C_IS	Auto	4.927	799211	799211	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.927	799211	8072864	26	4.1269	ng/mL	----
8_2-FTS_1	Auto	4.924	255	799211	15	0.0017	ng/mL	----
PFUnA	Auto	5.086	20905	4609445	14	-0.0109	ng/mL	----
PFUnA-13C_IS	Auto	5.108	4609445	4609445	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.108	4609445	8072864	26	3.2865	ng/mL	----
PFDoA	Auto	5.272	17265	5877880	17	0.0143	ng/mL	----
PFDoA-13C	Auto	5.285	5877880	8072864	26	2.8772	ng/mL	----
PFDoA-13C_IS	Auto	5.285	5877880	5877880	17	5.0000	ng/mL	----
PFTrDA	Auto	5.449	13906	4820699	22	0.0020	ng/mL	----
PFTeDA	Auto	5.603	49507	4820699	22	0.0092	ng/mL	----
PFTeDA-13C	Auto	5.603	4820699	8072864	26	3.1870	ng/mL	----
PFTeDA-13C_IS	Auto	5.603	4820699	4820699	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.247	1705952	1705952	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.247	1705952	8072864	26	3.2512	ng/mL	----
FOSA	Auto	5.252	1406	1705952	18	0.0031	ng/mL	----
N-MeFOSAA	M	5.037	298	835716	19	0.0029	ng/mL	----
N-MeFOSAA-d3	Auto	5.033	835716	8072864	26	2.1825	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.033	835716	835716	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	913918	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.129	913918	913918	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.129	913918	8072864	26	2.3925	ng/mL	----
13C7-PFUnDA_IS	Auto	5.108	8072864	8072864	26	5.0000	ng/mL	----

Insight Report

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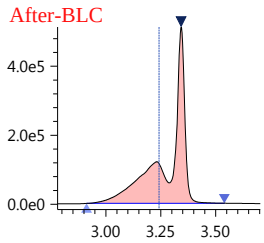
PFBA-13C_IS
Conc 5.0000
RT 3.343 Area 2403367
ISTD 216.90>172.15 (-) 5.14e5



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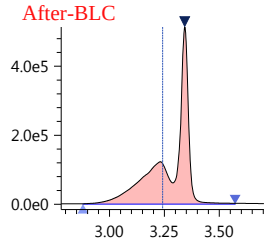
RT 3.343 Area 2485451
Q 216.90>172.15 (-) 5.14e5



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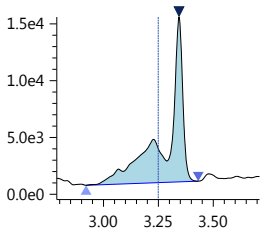
Conc 0.1601
RT 3.344 Area 72896
Q 213.00>169.10 (-) 1.56e4



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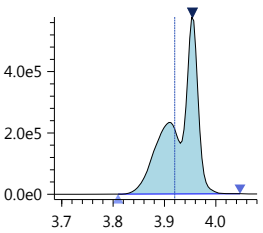
ISTD 267.90>223.00 (-) 5.78e5



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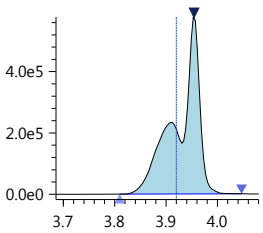

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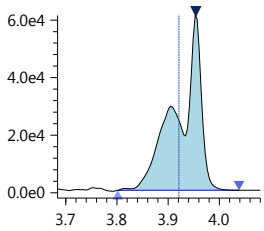
RT 3.954 Area 192821
Q 263.05>219.10 (-) 6.16e4



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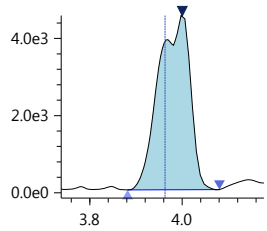

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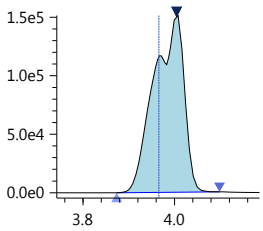
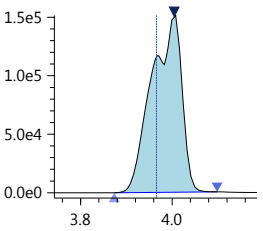
Q 301.80>80.00 (-) 1.51e5



PFBS-13C_IS
Conc 5.0000
RT 4.005 Area 694494
ISTD 301.80>80.00 (-) 1.51e5



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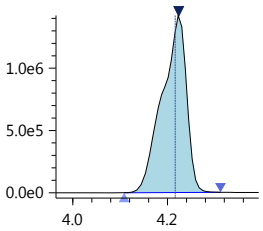

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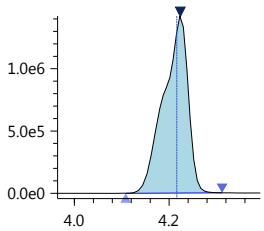
Q 314.90>270.10 (-) 1.42e6



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Conc 0.2262
RT 4.222 Area 236491
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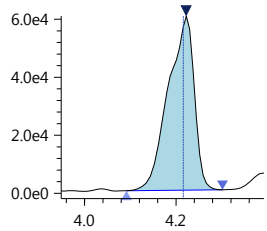

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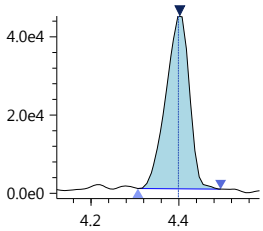
Q 362.90>319.00 (-) 4.53e4



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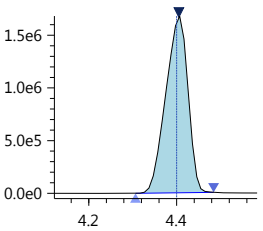
ISTD 366.90>322.10 (-) 1.68e6



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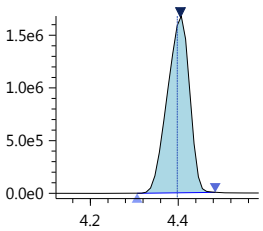

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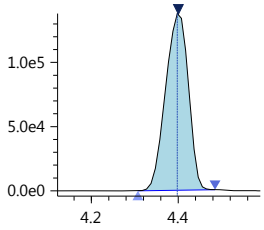

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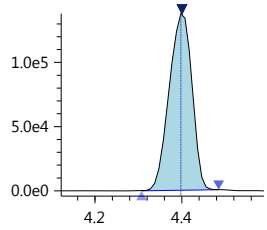

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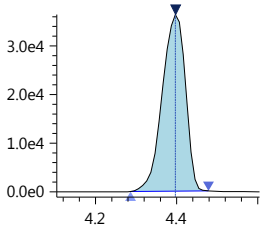
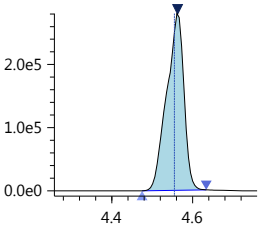
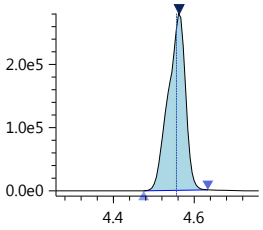
Conc 1.3162
RT 4.398 Area 144508
Q 399.00>80.00 (-) 3.65e4



6_2-FTS-13C
Conc 5.0082
RT 4.563 Area 831286
Q 428.90>409.00 (-) 2.81e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.563 Area 831286
ISTD 428.90>409.00 (-) 2.81e5



Insight Report

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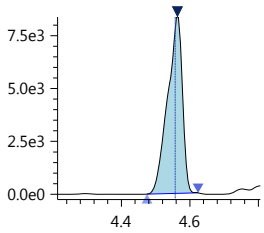
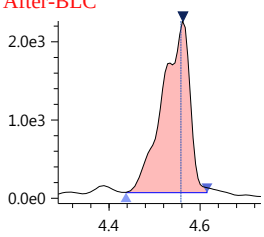
RT 4.564 Area 25118
Q 427.00>407.00 (-) 8.38e3



PFHpS_1
Conc 0.0740
RT 4.562 Area 9179
Q 449.00>80.15 (-) 2.27e3
After-BLC



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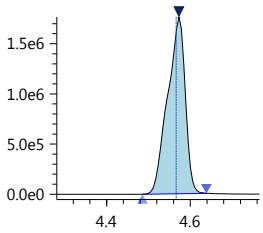
Conc 5.0000
RT 4.573 Area 5152089
ISTD 416.80>372.05 (-) 1.77e6



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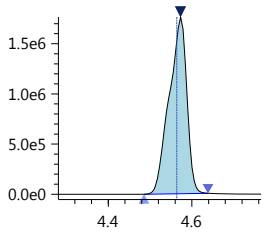
RT 4.573 Area 5152089
Q 416.80>372.05 (-) 1.77e6



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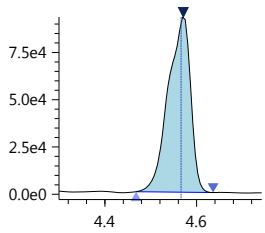
Q 413.00>369.00 (-) 9.38e4



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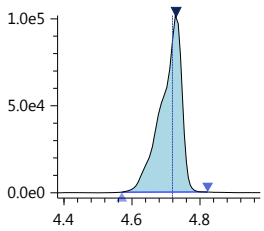
RT 4.730 Area 419352
Q 499.00>80.00 (-) 1.02e5



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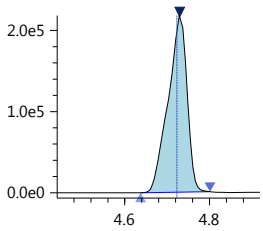
RT 4.730 Area 671299
ISTD 502.80>80.05 (-) 2.18e5



PFOS-13C
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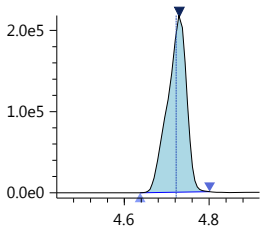

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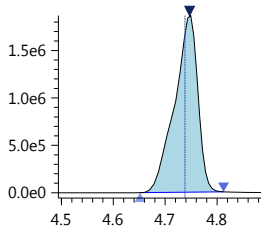

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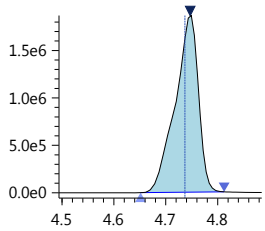

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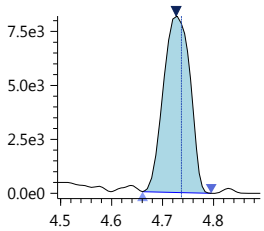
Q 463.00>418.90 (-) 8.22e3



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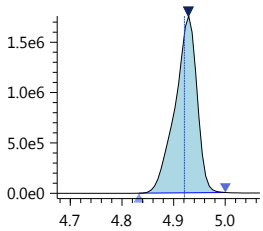

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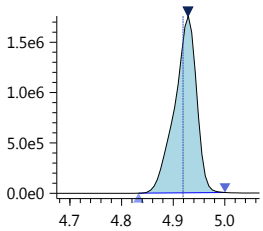

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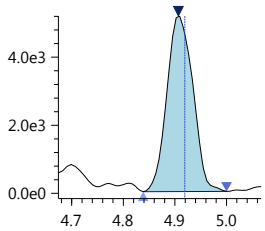
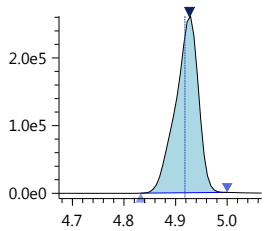
RT 4.907 Area 18180
Q 513.00>468.80 (-) 5.21e3



8_2-FTS-13C_IS
Conc 5.0000
RT 4.927 Area 799211
ISTD 528.80>509.00 (-) 2.62e5



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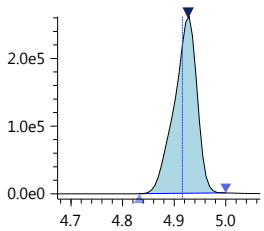
Q 528.80>509.00 (-) 2.62e5



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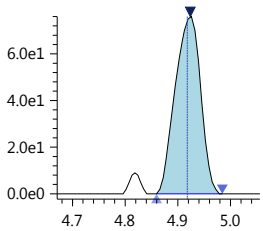

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Conc -0.0109
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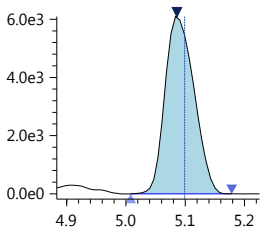
Q 563.00>518.90 (-) 6.09e3



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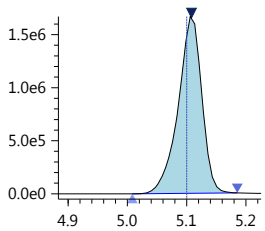
ISTD 564.80>519.95 (-) 1.67e6



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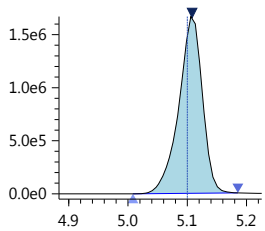

Insight Report

Printed at 3/21/2019 9:48:23 AM

PFDoA
Conc 0.0143
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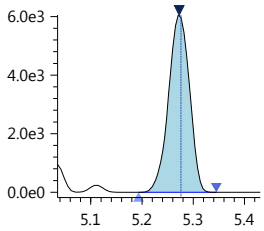
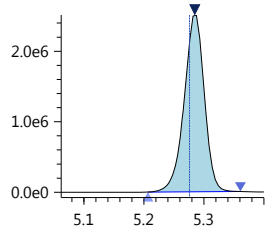
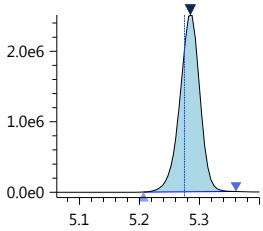
Q 613.05>569.00 (-) 6.05e3



PFDoA-13C
Conc 2.8772
RT 5.285 Area 5877880
Q 614.80>569.95 (-) 2.51e6



PFDoA-13C_IS
Conc 5.0000
RT 5.285 Area 5877880
ISTD 614.80>569.95 (-) 2.51e6



PFTrDA
Conc 0.0020
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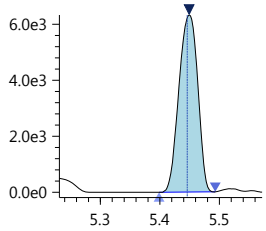

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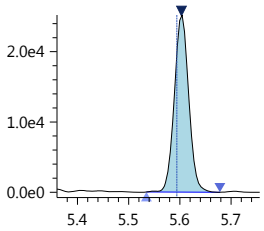
Q 713.40>669.00 (-) 2.52e4



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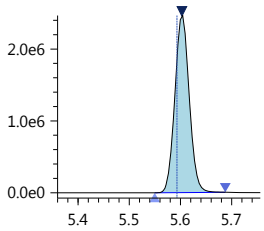

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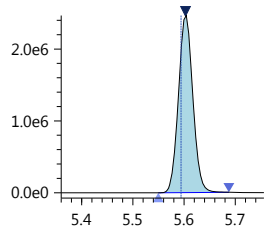

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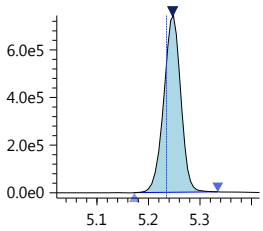
ISTD 506.00>78.05 (-) 7.44e5



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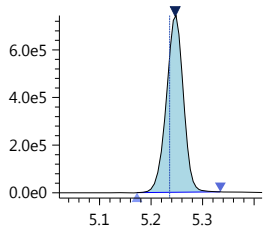
RT 5.247 Area 1705952
Q 506.00>78.05 (-) 7.44e5



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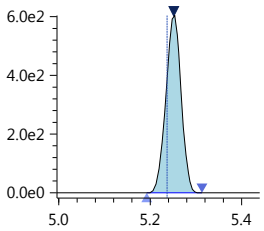
Q 498.20>78.00 (-) 6.04e2



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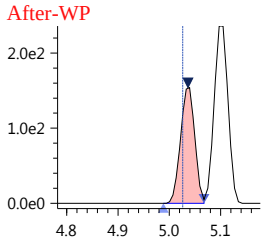
Q 570.20>419.00 (-) 2.36e2

After-WP



N-MeFOSAA-d3
Conc 2.1825
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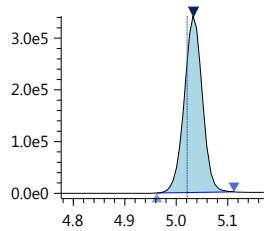
Q 572.80>419.05 (-) 3.43e5



N-MeFOSAA-d3_IS
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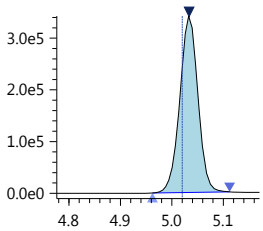
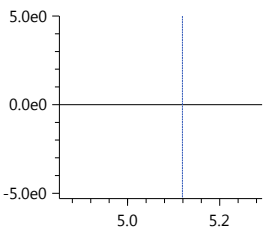
ISTD 572.80>419.05 (-) 3.43e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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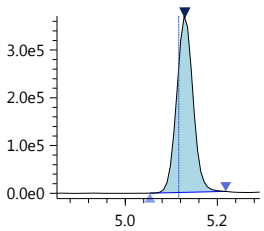
ISTD 588.80>419.00 (-) 3.71e5



N-EtFOSAA-d5
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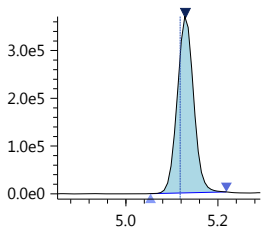

13C7-PFUnDA_IS
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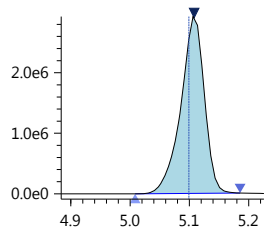
ISTD 570.00>525.00 (-) 2.93e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_022

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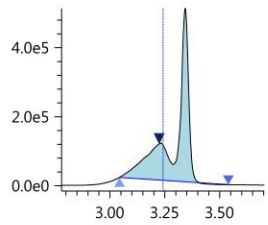
Date acquired: 3/19/2019 1:37:17 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_022.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 2

PFBA-13C_IS
Conc 5.0000
RT 3.224 Area 2014626
ISTD 216.90>172.15 (-) 5.14e5



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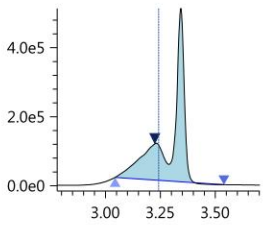

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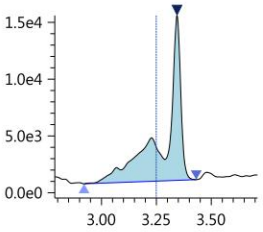
RT 3.344 Area 72896
Q 213.00>169.10 (-) 1.56e4



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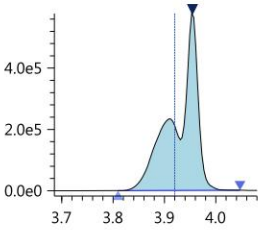

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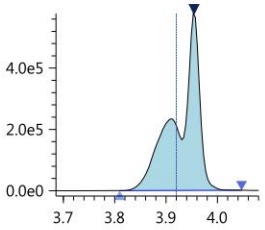

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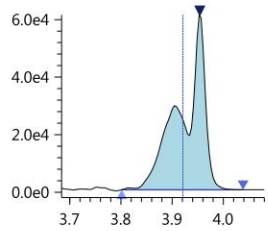
RT 3.954 Area 192821
Q 263.05>219.10 (-) 6.16e4



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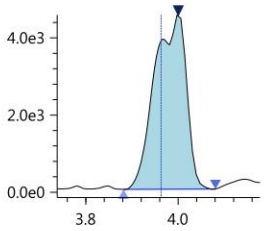
Q 299.00>80.00 (-) 4.60e3



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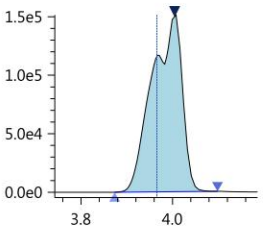

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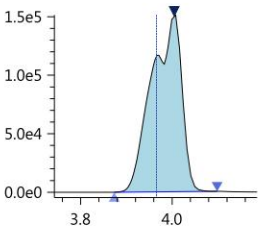
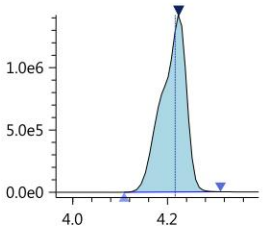
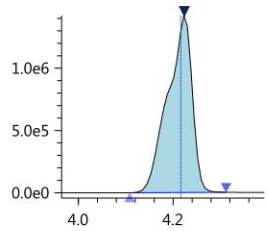
ISTD 301.80>80.00 (-) 1.51e5



PFHxA-13C_IS
Conc 5.0000
RT 4.224 Area 5073706
ISTD 314.90>270.10 (-) 1.42e6



PFHxA-13C
Conc 3.5305
RT 4.224 Area 5073706
Q 314.90>270.10 (-) 1.42e6



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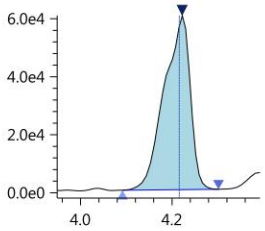
Conc 0.2262
RT 4.222 Area 236491
Q 313.00>269.00 (-) 6.11e4



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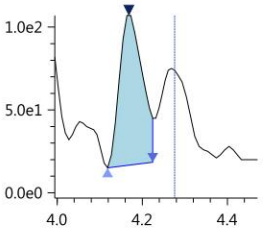
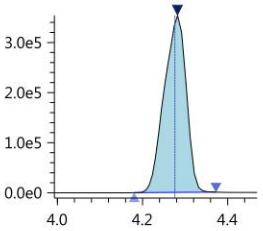
Conc 0.0012
RT 4.168 Area 339
Q 329.00>169.00 (-) 1.07e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.282 Area 1272538
ISTD 332.00>286.80 (-) 3.54e5



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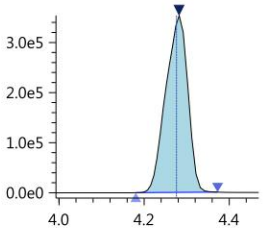
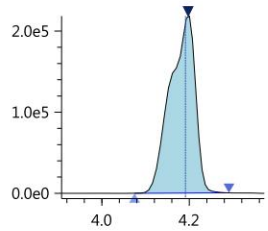
Conc 4.0780
RT 4.282 Area 1272538
Q 332.00>286.80 (-) 3.54e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.197 Area 875289
ISTD 328.80>309.05 (-) 2.19e5



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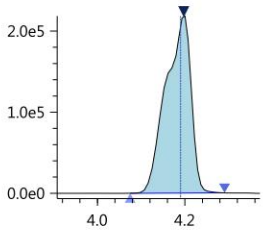
Conc 4.6651
RT 4.197 Area 875289
Q 328.80>309.05 (-) 2.19e5



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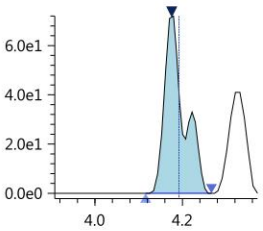
Conc 0.0011
RT 4.176 Area 229
Q 327.00>307.05 (-) 7.20e1



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Conc 0.1394
RT 4.402 Area 165806
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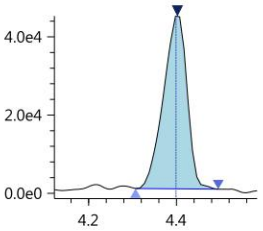
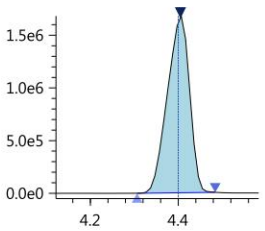


PFHpA-13C_IS
Conc 5.0000
RT 4.405 Area 5884675
ISTD 366.90>322.10 (-) 1.68e6



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PFHpA-13C
Conc 3.9814
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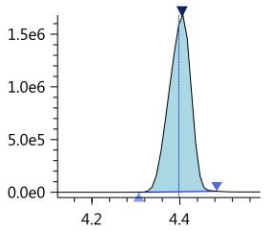
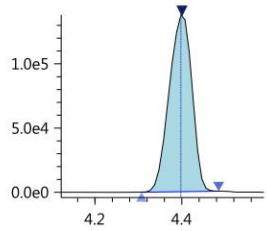
Q 366.90>322.10 (-) 1.68e6



PFHxS-18O_IS
Conc 5.0000
RT 4.401 Area 504498
ISTD 402.70>84.05 (-) 1.38e5



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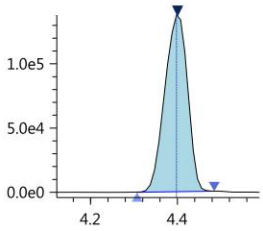
Q 402.70>84.05 (-) 1.38e5



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Conc 1.3162
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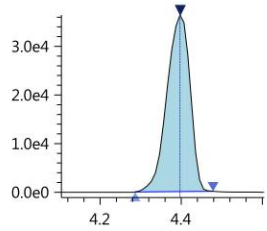
Q 399.00>80.00 (-) 3.65e4



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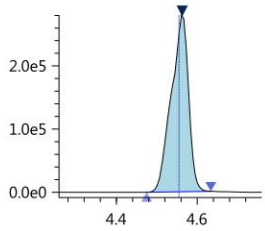
Conc 5.0082
RT 4.563 Area 831286
Q 428.90>409.00 (-) 2.81e5



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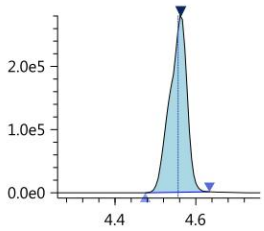
Conc 5.0000
RT 4.563 Area 831286
ISTD 428.90>409.00 (-) 2.81e5



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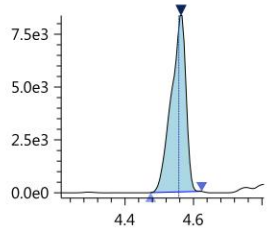
Conc 0.1429
RT 4.564 Area 25118
Q 427.00>407.00 (-) 8.38e3



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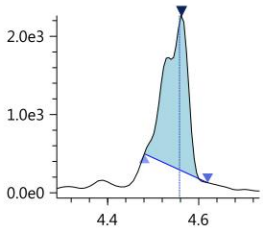
Conc 0.0548
RT 4.562 Area 6795
Q 449.00>80.15 (-) 2.27e3



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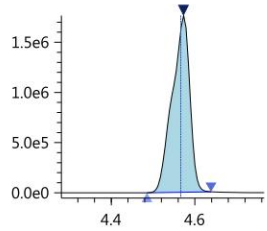
Conc 5.0000
RT 4.573 Area 5152089
ISTD 416.80>372.05 (-) 1.77e6



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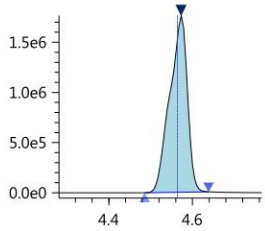
RT 4.573 Area 5152089
Q 416.80>372.05 (-) 1.77e6



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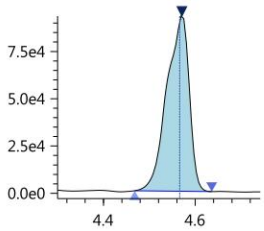
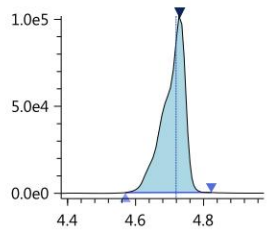
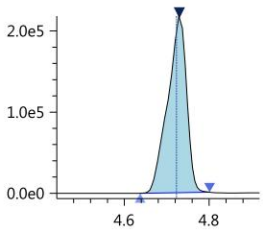
RT 4.571 Area 316399
Q 413.00>369.00 (-) 9.38e4



PFOS_1
Conc 4.5854
RT 4.730 Area 419352
Q 499.00>80.00 (-) 1.02e5



PFOS-13C_IS
Conc 5.0000
RT 4.730 Area 671299
ISTD 502.80>80.05 (-) 2.18e5



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Conc 3.9062
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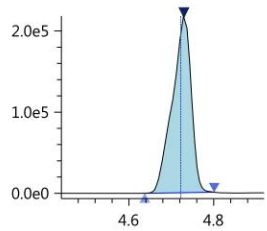
Q 502.80>80.05 (-) 2.18e5



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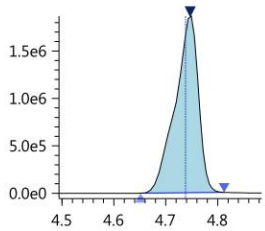
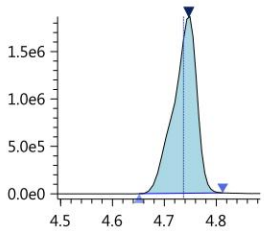
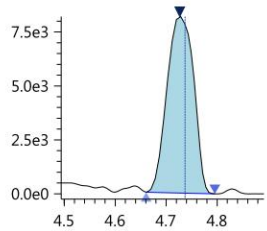
Conc 5.0000
RT 4.747 Area 5772029
ISTD 467.80>423.00 (-) 1.87e6



PFNA-13C
Conc 3.4932
RT 4.747 Area 5772029
Q 467.80>423.00 (-) 1.87e6



PFNA
Conc 0.0212
RT 4.727 Area 29956
Q 463.00>418.90 (-) 8.22e3



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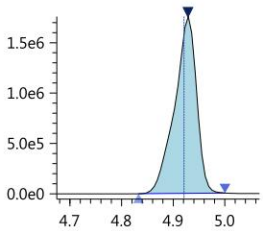
Conc 5.0000
RT 4.929 Area 5162304
ISTD 514.80>469.95 (-) 1.76e6



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Conc 3.3118
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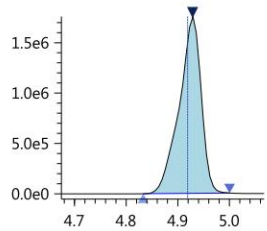
Q 514.80>469.95 (-) 1.76e6



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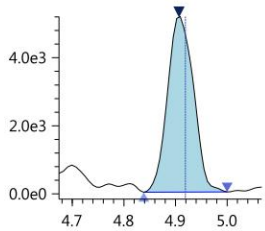
Conc 0.0216
RT 4.907 Area 18180
Q 513.00>468.80 (-) 5.21e3



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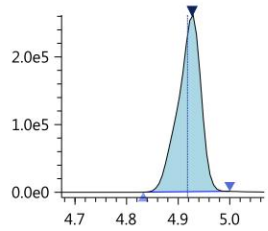
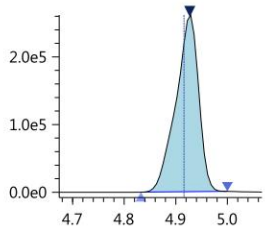
8_2-FTS-13C_IS
Conc 5.0000
RT 4.927 Area 799211
ISTD 528.80>509.00 (-) 2.62e5



8_2-FTS-13C
Conc 4.1269
RT 4.927 Area 799211
Q 528.80>509.00 (-) 2.62e5



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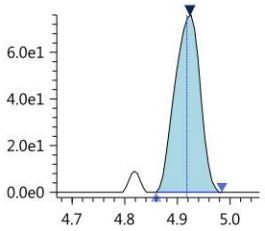
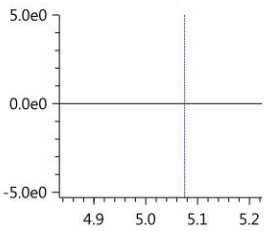
Conc 0.0017
RT 4.924 Area 255
Q 527.10>506.90 (-) 7.60e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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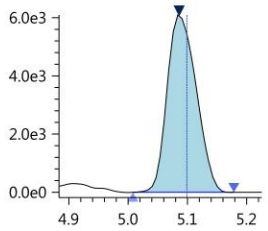
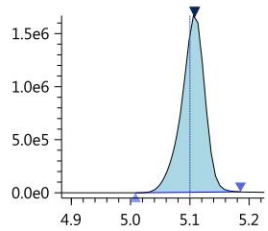
Conc -0.0109
RT 5.086 Area 20905
Q 563.00>518.90 (-) 6.09e3



PFUnA-13C_IS
Conc 5.0000
RT 5.108 Area 4609445
ISTD 564.80>519.95 (-) 1.67e6



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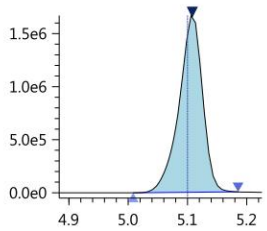
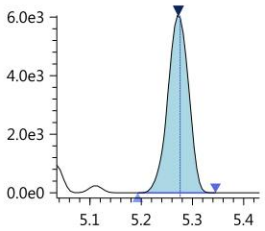
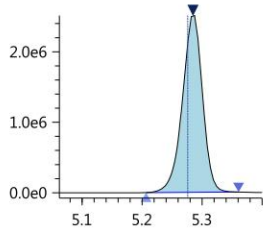
Conc 3.2865
RT 5.108 Area 4609445
Q 564.80>519.95 (-) 1.67e6



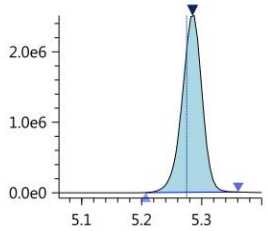
PFDoA
Conc 0.0143
RT 5.272 Area 17265
Q 613.05>569.00 (-) 6.05e3



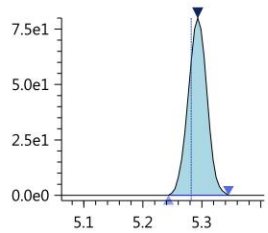
PFDoA-13C
Conc 2.8772
RT 5.285 Area 5877880
Q 614.80>569.95 (-) 2.51e6



PFDoA-13C_IS
Conc 5.0000
RT 5.285 Area 5877880
ISTD 614.80>569.95 (-) 2.51e6



10_2-FtS_1
Conc 0.0010
RT 5.293 Area 180
Q 627.00>606.95 (-) 8.00e1



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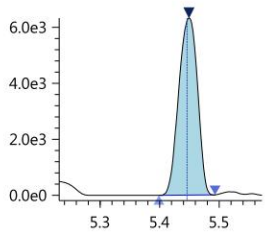
Conc 0.0020
RT 5.449 Area 13906
Q 663.00>618.90 (-) 6.33e3



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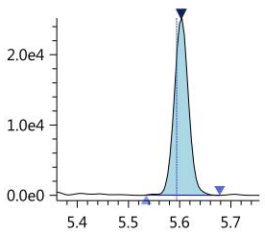
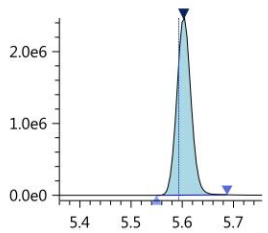
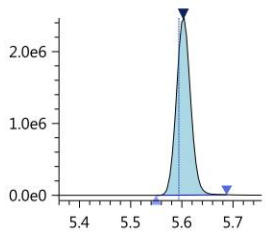
Conc 0.0092
RT 5.603 Area 49507
Q 713.40>669.00 (-) 2.52e4



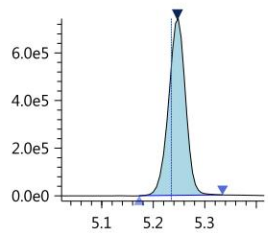
PFTeDA-13C
Conc 3.1870
RT 5.603 Area 4820699
Q 714.70>669.90 (-) 2.47e6



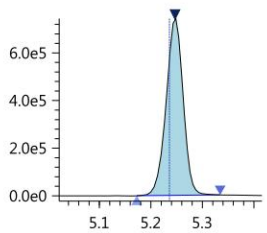
PFTeDA-13C_IS
Conc 5.0000
RT 5.603 Area 4820699
ISTD 714.70>669.90 (-) 2.47e6



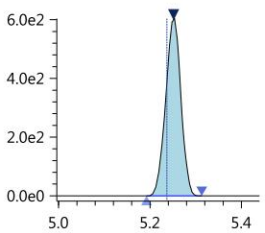
FOSA-13C_IS
Conc 5.0000
RT 5.247 Area 1705952
ISTD 506.00>78.05 (-) 7.44e5



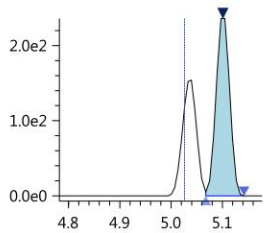
FOSA-13C
Conc 3.2512
RT 5.247 Area 1705952
Q 506.00>78.05 (-) 7.44e5



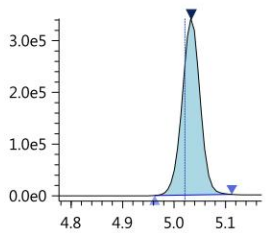
FOSA
Conc 0.0031
RT 5.252 Area 1406
Q 498.20>78.00 (-) 6.04e2



N-MeFOSAA
Conc 0.0043
RT 5.101 Area 446
Q 570.20>419.00 (-) 2.36e2



N-MeFOSAA-d3
Conc 2.1825
RT 5.033 Area 835716
Q 572.80>419.05 (-) 3.43e5



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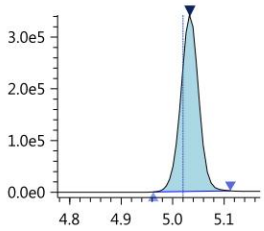
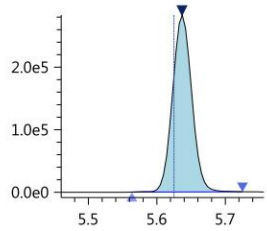
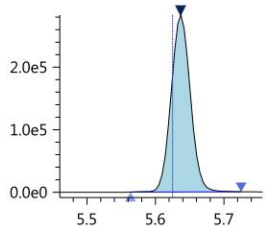
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.033 Area 835716
ISTD 572.80>419.05 (-) 3.43e5



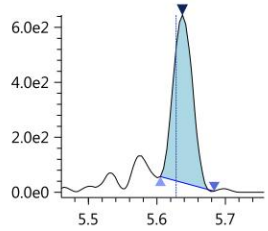
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.637 Area 555439
ISTD 514.90>168.90 (-) 2.83e5



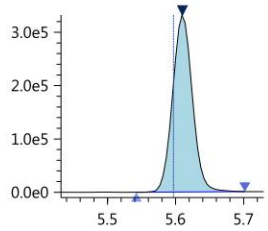
N-MeFOSA-d3
Conc 2.9129
RT 5.637 Area 555439
Q 514.90>168.90 (-) 2.83e5



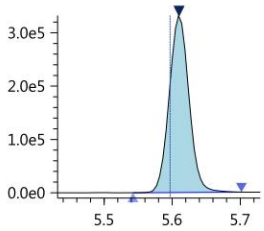
N-MeFOSA
Conc 0.0092
RT 5.637 Area 1204
Q 512.00>169.10 (-) 6.45e2



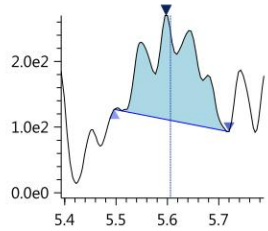
N-MeFOSE-d7
Conc 3.3273
RT 5.610 Area 670925
Q 622.70>59.10 (-) 3.32e5



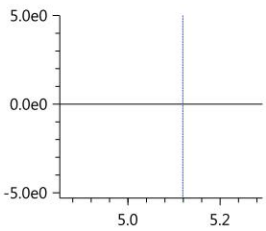
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.610 Area 670925
ISTD 622.70>59.10 (-) 3.32e5



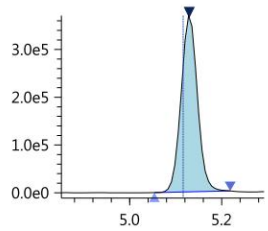
N-MeFOSE
Conc 0.0059
RT 5.598 Area 1024
Q 616.00>59.00 (-) 2.70e2



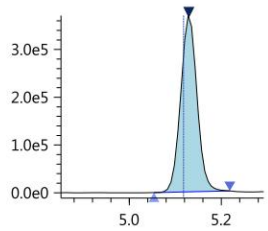
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



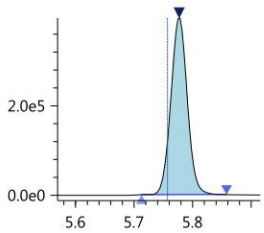
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.129 Area 913918
ISTD 588.80>419.00 (-) 3.71e5



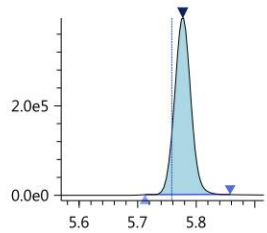
N-EtFOSAA-d5
Conc 2.3925
RT 5.129 Area 913918
Q 588.80>419.00 (-) 3.71e5



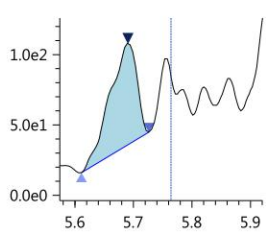
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.777 Area 772106
ISTD 530.90>169.15 (-) 3.96e5



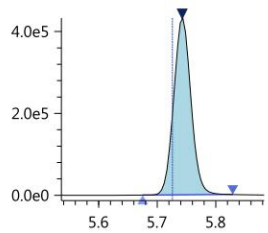
N-EtFOSA-d9
Conc 2.9243
RT 5.777 Area 772106
Q 530.90>169.15 (-) 3.96e5



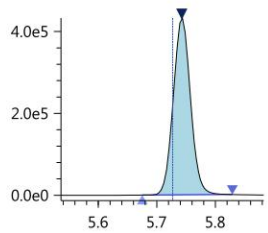
N-EtFOSA
Conc 0.0091
RT 5.691 Area 234
Q 526.90>169.10 (-) 1.26e2



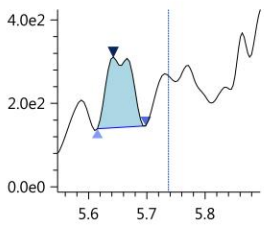
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.743 Area 885571
ISTD 638.70>59.10 (-) 4.33e5



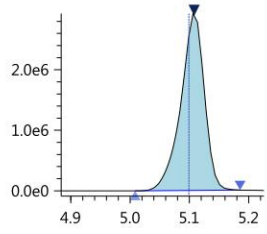
N-EtFOSE-d9
Conc 3.1818
RT 5.743 Area 885571
Q 638.70>59.10 (-) 4.33e5



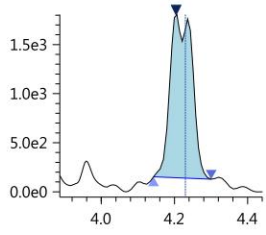
N-EtFOSE
Conc 0.0031
RT 5.642 Area 518
Q 630.00>58.90 (-) 4.25e2



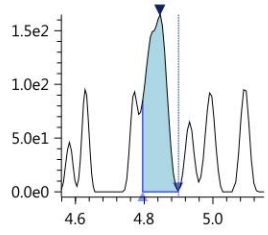
13C7-PFUnDA_IS
Conc 5.0000
RT 5.108 Area 8072864
ISTD 570.00>525.00 (-) 2.93e6



PFPeS
Conc 0.0785
RT 4.204 Area 7056
Q 349.00>99.00 (-) 1.81e3



PFNS
Conc 0.0069
RT 4.846 Area 647
Q 549.00>99.00 (-) 1.65e2



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_023
Lab ID: K1902064-007
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 13:47
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok
Above Highest ICAL Level	Perfluoropentanoic acid (PFPeA)	28753648		11838782	See dilution
	Perfluorohexanoic acid (PFHxA)	27377229		14114959	See dilution
	Perfluoroheptanoic acid (PFHpA)	31901785		12374786	See dilution

Primary Review: _____

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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_023	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:47	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-007	**Raw Units:**	ng/mL

Bottle ID:	K1902064-007.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.110	0.00	7169881	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.014	+0.00	489347	2.6164	52	20 - 109	Y
18O2-PFHxS	4.411		405201	3.1496	63	26 - 122	Y
13C4-PFOS	4.733	+0.00	610268	3.9983	80	25 - 121	Y
13C4-PFBA	3.348	-0.01	2140283	3.3521	67	27 - 124	Y
13C5-PFPeA	3.966	+0.01	1274498	3.0793	62	27 - 138	Y
13C2-PFHxA	4.228	0.00	3400173	2.6640	53	28 - 132	Y
13C4-PFHpA	4.413	+0.00	4017219	3.0602	61	19 - 139	Y
13C4-PFOA	4.577	+0.00	4496186	3.4362	69	22 - 130	Y
13C5-PFNA	4.749		5176442	3.5273	71	20 - 127	Y
13C2-PFDA	4.930		4186821	3.0243	60	24 - 125	Y
13C2-PFUnDA	5.111	0.00	3754233	3.0139	60	22 - 125	Y
13C2-PFDoDA	5.288		4638698	2.5566	51	19 - 122	Y
13C2-PFTeDA	5.602		3783864	2.8166	56	13 - 124	Y
13C8-FOSA	5.250	+0.00	1460812	3.1346	63	18 - 109	Y
D3-MeFOSAA	5.035	0.00	700948	2.0611	41	9 - 123	Y
D5-EtFOSAA	5.131	0.00	748893	2.2074	44	12 - 126	Y
13C2-6:2 FTS	4.567		995998	6.7562	135	10 - 226	Y
13C2-8:2 FTS	4.928		773444	4.4968	90	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)	4.012	+0.00	169414	1.6132	40		Y
Perfluorohexane sulfonic acid (PFHxS)	4.408	0.00	543946	6.1683	150		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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_023	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:47	**Vial:**	9
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-007	**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)	4.734	+0.00	7933	0.0954	2.4		Y
Perfluorodecane sulfonic acid (PFDS)	5.086	-0.01	177	0.0018	0.045	U	Y
Perfluorobutanoic acid (PFBA)	3.347	-0.01	6417482	15.8309	400		Y
Perfluoropentanoic acid (PFPeA)	3.967	+0.01	28753648	49.1052	1200	E	Y
Perfluorohexanoic acid (PFHxA)	4.228	0.00	27377229	45.1060	1100	E	Y
Perfluoroheptanoic acid (PFHpA)	4.413	+0.00	31901785	50.4892	1300	E	Y
Perfluorooctanoic acid (PFOA)	4.577	+0.00	5145716	6.9196	170		Y
Perfluorononanoic acid (PFNA)	4.748	0.00	33378	0.0305	0.76	U	Y
Perfluorodecanoic acid (PFDA)	4.928	0.00	19646	0.0288	0.72	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.109	-0.01	24165	0.0015	0.038	U	Y
Perfluorododecanoic acid (PFDoDA)	5.283	-0.01	7326	0.0030	0.075	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.453	0.00	13483	0.0058	0.15	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.603	+0.00	36851	0.0015	0.038	U	Y
Perfluorooctane sulfonamide (FOSA)	5.251	+0.01	1296	0.0034	0.085	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.033	-0.01	394	0.0046	0.12	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.121	-0.02	333	0.0038	0.095	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.567		38539	0.1830	4.6		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.927	0.00	3861	0.0261	0.65	J	Y

Prep Amount:	320.0000 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 3/21/2019 9:48:23 AM

190319_023

Sample ID: K1902064-007
Date acquired: 3/19/2019 1:47:44 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_023.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.348	2140283	2140283	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.348	2140283	7169881	26	3.3521	ng/mL	----
PFBA	Auto	3.347	6417482	2140283	2	15.8309	ng/mL	----
PFPeA-13C_IS	Auto	3.966	1274498	1274498	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.966	1274498	7169881	26	3.0793	ng/mL	----
PFPeA	Auto	3.967	28753648	1274498	4	49.1052	ng/mL	----
PFBS_1	Auto	4.012	169414	489347	16	1.6132	ng/mL	----
PFBS-13C	Auto	4.014	489347	7169881	26	2.6164	ng/mL	----
PFBS-13C_IS	Auto	4.014	489347	489347	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.228	3400173	3400173	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.228	3400173	7169881	26	2.6640	ng/mL	----
PFHxA	Auto	4.228	27377229	3400173	6	45.1060	ng/mL	----
PFHpA	Auto	4.413	31901785	4017219	8	50.4892	ng/mL	----
PFHpA-13C_IS	Auto	4.413	4017219	4017219	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.413	4017219	7169881	26	3.0602	ng/mL	----
PFHxS-18O_IS	Auto	4.411	405201	405201	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.411	405201	7169881	26	3.1496	ng/mL	----
PFHxS_1	Auto	4.408	543946	405201	7	6.1683	ng/mL	----
6_2-FTS-13C	Auto	4.567	995998	7169881	26	6.7562	ng/mL	----
6_2-FTS-13C_IS	Auto	4.567	995998	995998	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.567	38539	995998	10	0.1830	ng/mL	----
PFHpS_1	ND(W/B)	----	----	405201	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.577	4496186	4496186	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.577	4496186	7169881	26	3.4362	ng/mL	----
PFOA	Auto	4.577	5145716	4496186	9	6.9196	ng/mL	----
PFOS_1	M	4.734	7933	610268	13	0.0954	ng/mL	----
PFOS-13C_IS	Auto	4.733	610268	610268	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.733	610268	7169881	26	3.9983	ng/mL	----
PFNA-13C_IS	Auto	4.749	5176442	5176442	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.749	5176442	7169881	26	3.5273	ng/mL	----
PFNA	M	4.748	33378	5176442	11	0.0305	ng/mL	----
PFDA-13C_IS	Auto	4.930	4186821	4186821	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.930	4186821	7169881	26	3.0243	ng/mL	----
PFDA	Auto	4.928	19646	4186821	12	0.0288	ng/mL	----
8_2-FTS-13C_IS	Auto	4.928	773444	773444	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.928	773444	7169881	26	4.4968	ng/mL	----
8_2-FTS_1	Auto	4.927	3861	773444	15	0.0261	ng/mL	----
PFUnA	M	5.109	24165	3754233	14	0.0015	ng/mL	----
PFUnA-13C_IS	Auto	5.111	3754233	3754233	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.111	3754233	7169881	26	3.0139	ng/mL	----
PFDoA	Auto	5.283	7326	4638698	17	0.0030	ng/mL	----
PFDoA-13C	Auto	5.288	4638698	7169881	26	2.5566	ng/mL	----
PFDoA-13C_IS	Auto	5.288	4638698	4638698	17	5.0000	ng/mL	----
PFTrDA	M	5.453	13483	3783864	22	0.0058	ng/mL	----
PFTeDA	Auto	5.603	36851	3783864	22	0.0015	ng/mL	----
PFTeDA-13C	Auto	5.602	3783864	7169881	26	2.8166	ng/mL	----
PFTeDA-13C_IS	Auto	5.602	3783864	3783864	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.250	1460812	1460812	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.250	1460812	7169881	26	3.1346	ng/mL	----
FOSA	Auto	5.251	1296	1460812	18	0.0034	ng/mL	----
N-MeFOSAA	Auto	5.033	394	700948	19	0.0046	ng/mL	----
N-MeFOSAA-d3	Auto	5.035	700948	7169881	26	2.0611	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.035	700948	700948	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.121	333	748893	21	0.0038	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.131	748893	748893	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.131	748893	7169881	26	2.2074	ng/mL	----
13C7-PFUnDA_IS	Auto	5.110	7169881	7169881	26	5.0000	ng/mL	----

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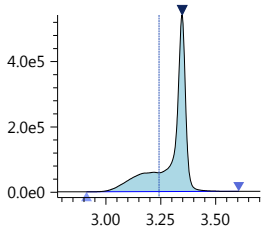
PFBA-13C_IS
Conc 5.0000
RT 3.348 Area 2140283
ISTD 216.90>172.15 (-) 5.43e5



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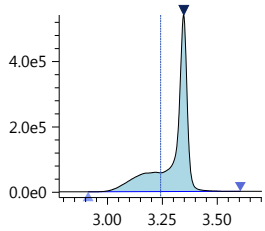
Q 216.90>172.15 (-) 5.43e5



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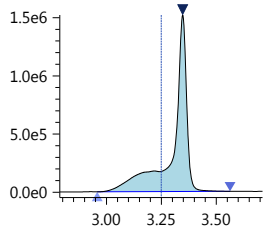
Conc 15.8309
RT 3.347 Area 6417482
Q 213.00>169.10 (-) 1.52e6



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Conc 5.0000
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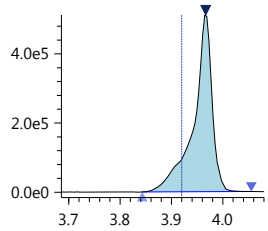
ISTD 267.90>223.00 (-) 5.13e5



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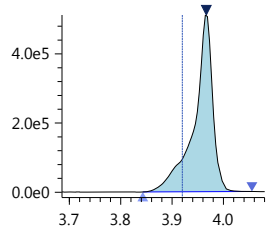

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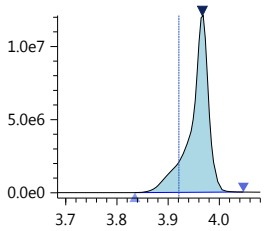
Q 263.05>219.10 (-) 1.21e7



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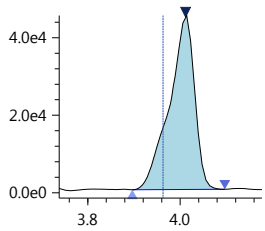
Conc 1.6132
RT 4.012 Area 169414
Q 299.00>80.00 (-) 4.57e4



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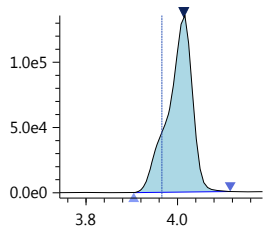
Conc 2.6164
RT 4.014 Area 489347
Q 301.80>80.00 (-) 1.36e5



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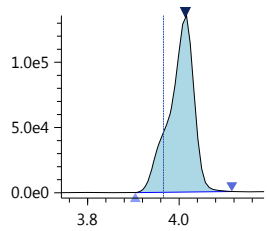

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Conc 5.0000
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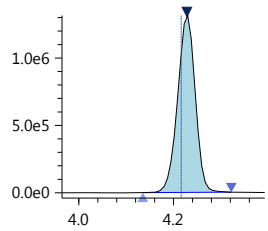
ISTD 314.90>270.10 (-) 1.32e6



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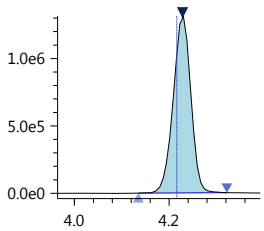

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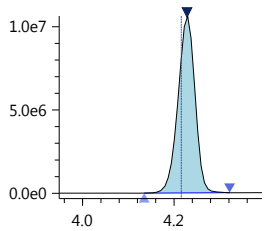
Q 313.00>269.00 (-) 1.06e7



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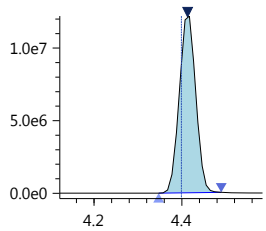

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Conc 5.0000
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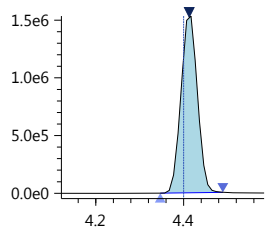
ISTD 366.90>322.10 (-) 1.54e6



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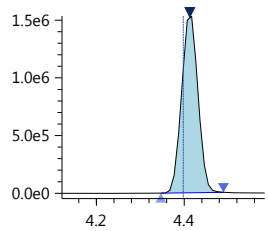
Conc 3.0602
RT 4.413 Area 4017219
Q 366.90>322.10 (-) 1.54e6



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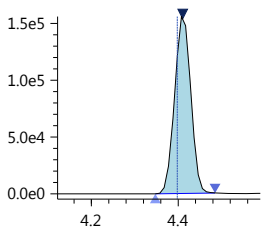

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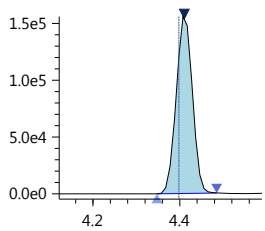

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Conc 6.1683
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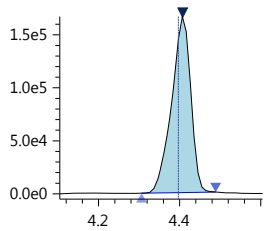
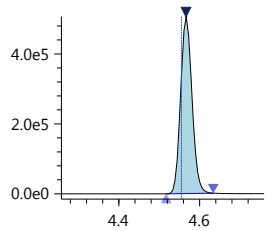
Q 399.00>80.00 (-) 1.67e5



6_2-FTS-13C
Conc 6.7562
RT 4.567 Area 995998
Q 428.90>409.00 (-) 5.07e5



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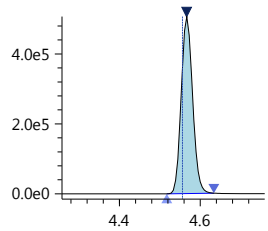
Conc 5.0000
RT 4.567 Area 995998
ISTD 428.90>409.00 (-) 5.07e5



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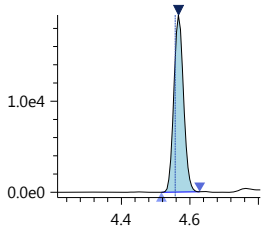
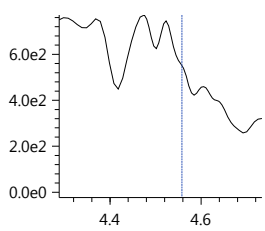
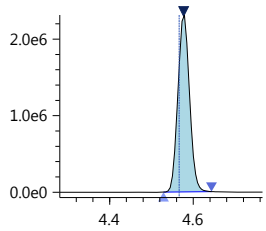
6_2-FTS_1
Conc 0.1830
RT 4.567 Area 38539
Q 427.00>407.00 (-) 1.95e4



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 7.71e2



PFOA-13C_IS
Conc 5.0000
RT 4.577 Area 4496186
ISTD 416.80>372.05 (-) 2.32e6



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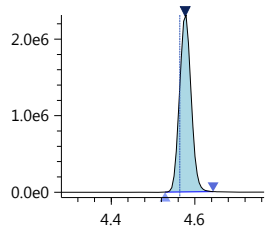
Q 416.80>372.05 (-) 2.32e6



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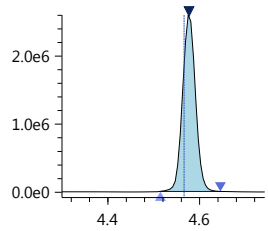
RT 4.577 Area 5145716
Q 413.00>369.00 (-) 2.60e6



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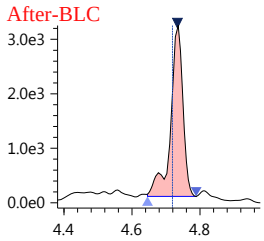
Conc 0.0954
RT 4.734 Area 7933
Q 499.00>80.00 (-) 3.25e3



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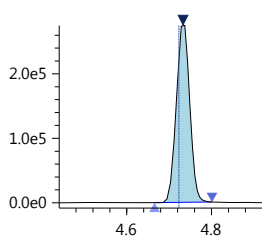

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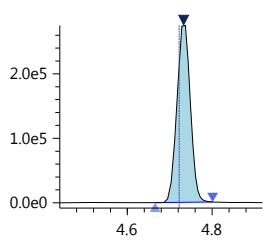
Q 502.80>80.05 (-) 2.75e5



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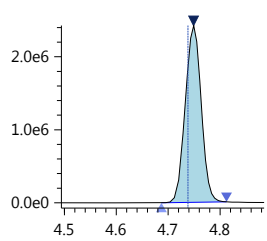
ISTD 467.80>423.00 (-) 2.43e6



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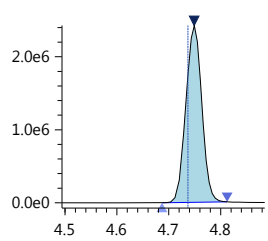

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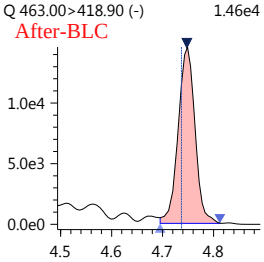

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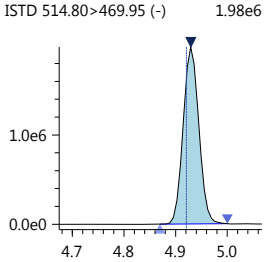

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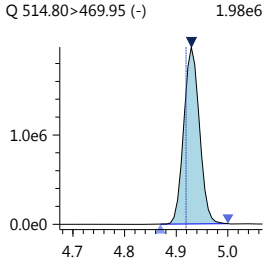

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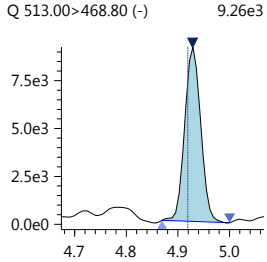
RT 4.928 Area 19646
Q 513.00>468.80 (-) 9.26e3



8_2-FTS-13C_IS
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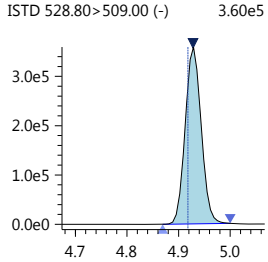
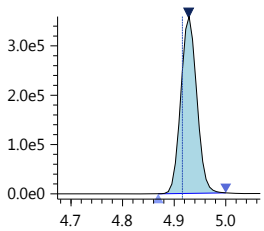
RT 4.928 Area 773444
ISTD 528.80>509.00 (-) 3.60e5



8_2-FTS-13C
Conc 4.4968
RT 4.928 Area 773444
Q 528.80>509.00 (-) 3.60e5



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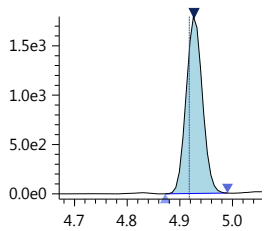
Conc 0.0261
RT 4.927 Area 3861
Q 527.10>506.90 (-) 1.80e3



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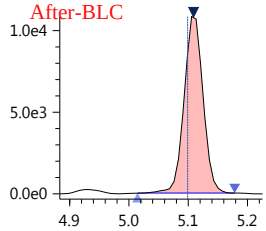
Conc 0.0015
RT 5.109 Area 24165
Q 563.00>518.90 (-) 1.09e4



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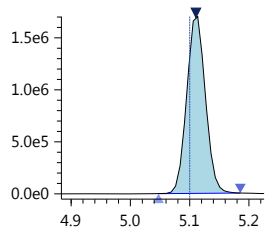
Conc 5.0000
RT 5.111 Area 3754233
ISTD 564.80>519.95 (-) 1.70e6



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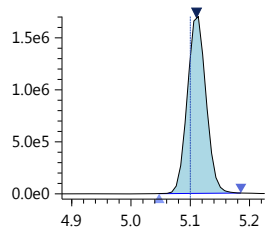
RT 5.111 Area 3754233
Q 564.80>519.95 (-) 1.70e6



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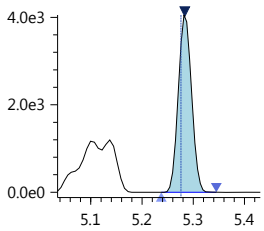
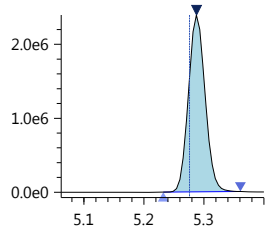


PFDoA-13C
Conc 2.5566
RT 5.288 Area 4638698
Q 614.80>569.95 (-) 2.40e6



PFDoA-13C_IS
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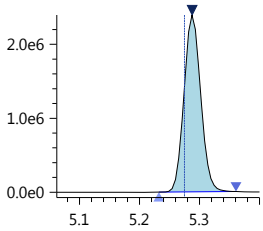
RT 5.288 Area 4638698
ISTD 614.80>569.95 (-) 2.40e6



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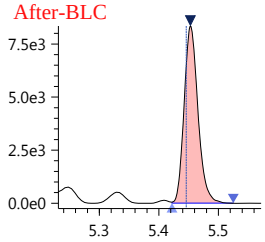
RT 5.453 Area 13483
Q 663.00>618.90 (-) 8.35e3

After-BLC



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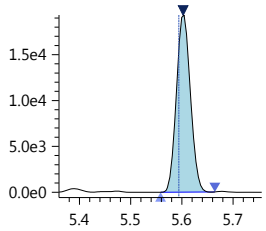
Q 713.40>669.00 (-) 1.93e4



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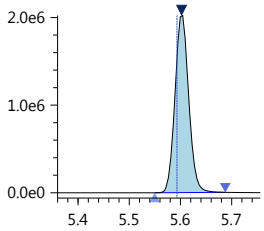
Q 714.70>669.90 (-) 2.02e6



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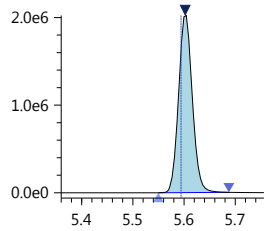

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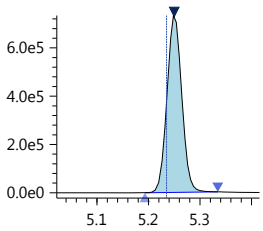
ISTD 506.00>78.05 (-) 7.34e5



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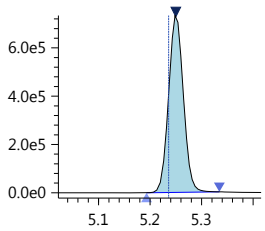

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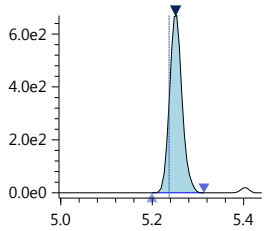

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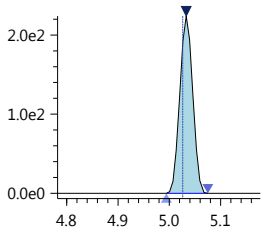
Q 570.20>419.00 (-) 2.24e2



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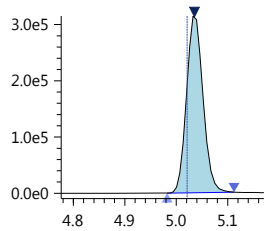
Q 572.80>419.05 (-) 3.15e5



N-MeFOSAA-d3_IS
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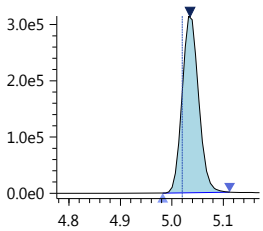
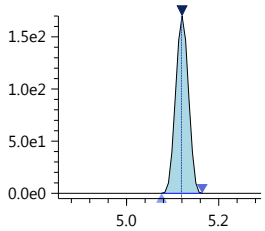
ISTD 572.80>419.05 (-) 3.15e5



N-EtFOSAA
Conc 0.0038
RT 5.121 Area 333
Q 584.20>418.95 (-) 1.70e2



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Conc 5.0000
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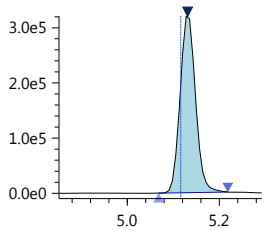
ISTD 588.80>419.00 (-) 3.21e5



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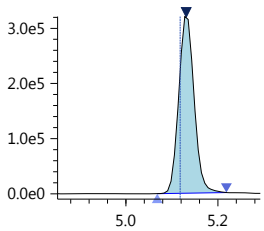

13C7-PFUnDA_IS
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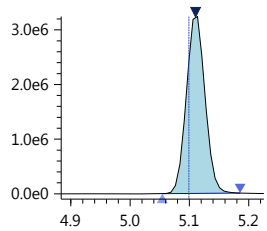
RT 5.110 Area 7169881
ISTD 570.00>525.00 (-) 3.24e6



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Printed at 3/21/2019 9:16:10 AM

190319_023

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Acquired by: System Administrator
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PFBA-13C_IS
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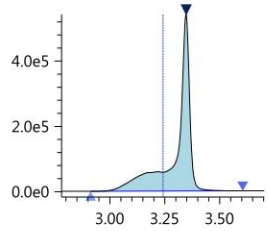

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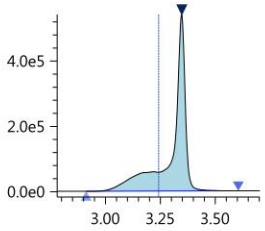

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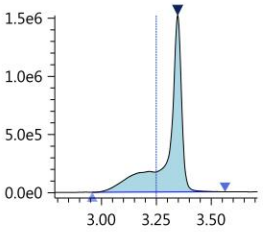

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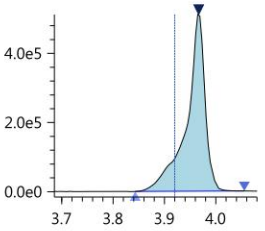
ISTD 267.90>223.00 (-) 5.13e5



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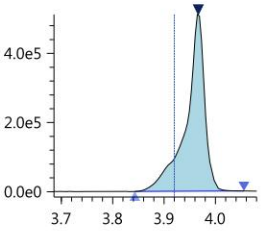

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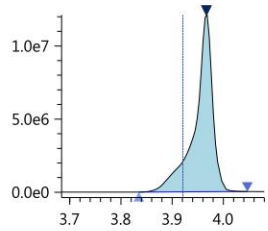
Q 263.05>219.10 (-) 1.21e7



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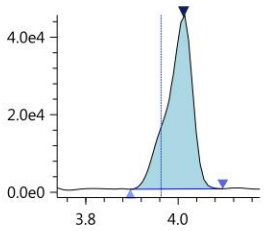

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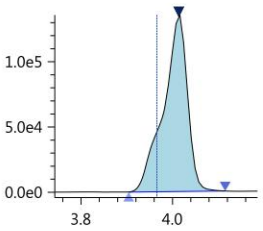
Q 301.80>80.00 (-) 1.36e5



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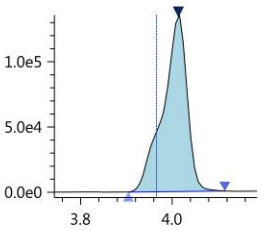

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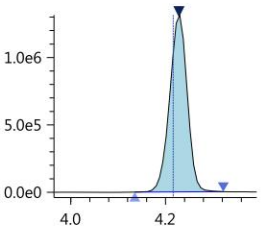

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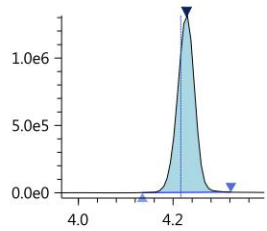

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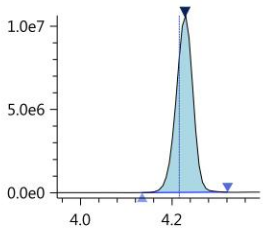

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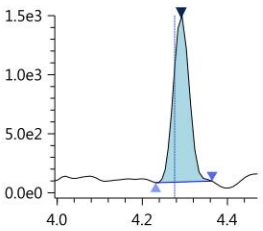
RT 4.291 Area 3713
Q 329.00>169.00 (-) 1.50e3



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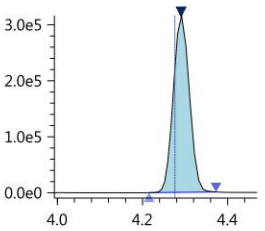

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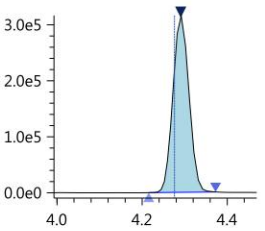
Q 332.00>286.80 (-) 3.17e5



4_2-FTS-13C_IS
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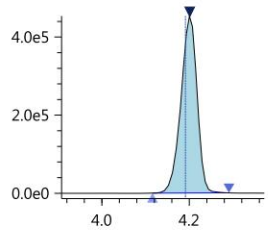
ISTD 328.80>309.05 (-) 4.54e5



4_2-FTS-13C
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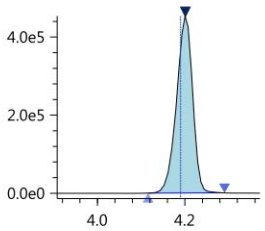

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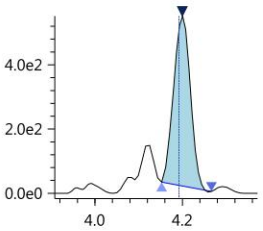
Q 327.00>307.05 (-) 5.52e2



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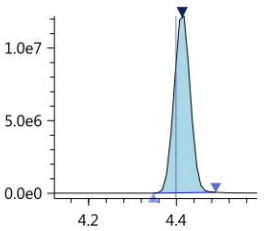
Conc 50.4892
RT 4.413 Area 31901785
Q 362.90>319.00 (-) 1.22e7



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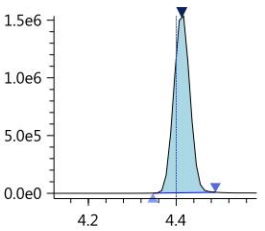

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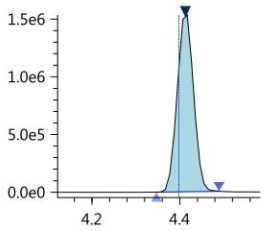

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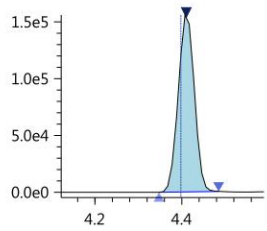

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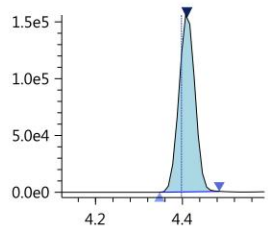
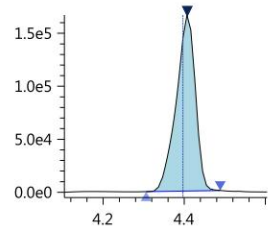
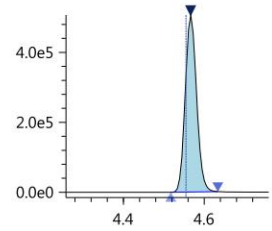
RT 4.411 Area 405201
Q 402.70>84.05 (-) 1.56e5



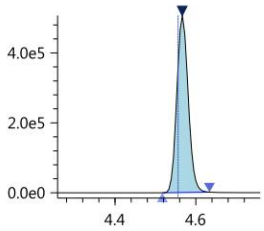
PFHxS_1
Conc 6.1683
RT 4.408 Area 543946
Q 399.00>80.00 (-) 1.67e5



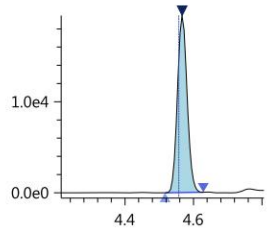
6_2-FTS-13C
Conc 6.7562
RT 4.567 Area 995998
Q 428.90>409.00 (-) 5.07e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 995998
ISTD 428.90>409.00 (-) 5.07e5



6_2-FTS_1
Conc 0.1830
RT 4.567 Area 38539
Q 427.00>407.00 (-) 1.95e4



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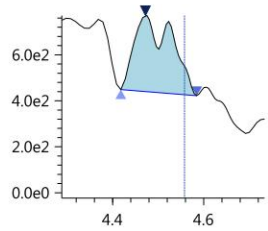
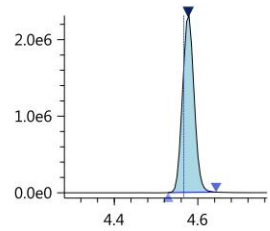
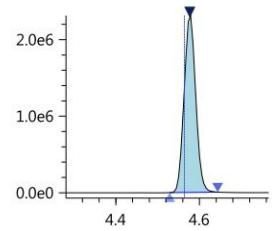
Conc 0.0192
RT 4.472 Area 1916
Q 449.00>80.15 (-) 7.71e2



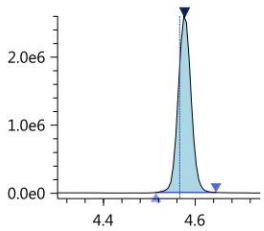
PFOA-13C_IS
Conc 5.0000
RT 4.577 Area 4496186
ISTD 416.80>372.05 (-) 2.32e6



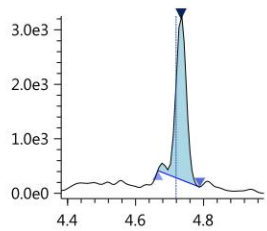
PFOA-13C
Conc 3.4362
RT 4.577 Area 4496186
Q 416.80>372.05 (-) 2.32e6



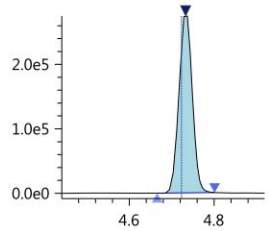
PFOA
Conc 6.9196
RT 4.577 Area 5145716
Q 413.00>369.00 (-) 2.60e6



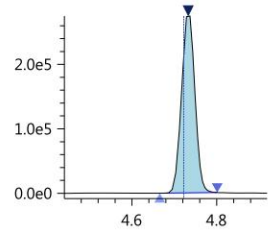
PFOS_1
Conc 0.0801
RT 4.734 Area 6657
Q 499.00>80.00 (-) 3.25e3



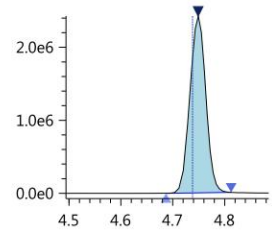
PFOS-13C_IS
Conc 5.0000
RT 4.733 Area 610268
ISTD 502.80>80.05 (-) 2.75e5



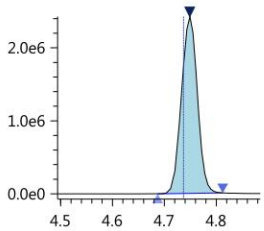
PFOS-13C
Conc 3.9983
RT 4.733 Area 610268
Q 502.80>80.05 (-) 2.75e5



PFNA-13C_IS
Conc 5.0000
RT 4.749 Area 5176442
ISTD 467.80>423.00 (-) 2.43e6



PFNA-13C
Conc 3.5273
RT 4.749 Area 5176442
Q 467.80>423.00 (-) 2.43e6



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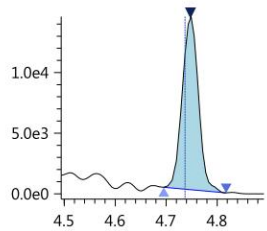
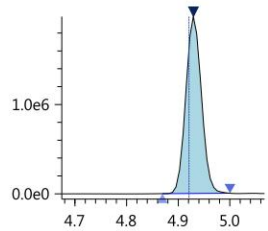
Conc 0.0280
RT 4.748 Area 31637
Q 463.00>418.90 (-) 1.46e4



PFDA-13C_IS
Conc 5.0000
RT 4.930 Area 4186821
ISTD 514.80>469.95 (-) 1.98e6



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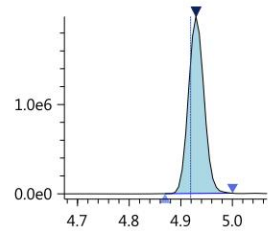
RT 4.930 Area 4186821
Q 514.80>469.95 (-) 1.98e6



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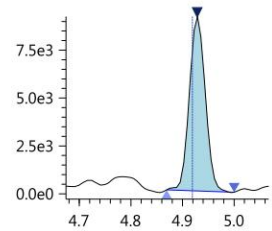
Conc 0.0288
RT 4.928 Area 19646
Q 513.00>468.80 (-) 9.26e3



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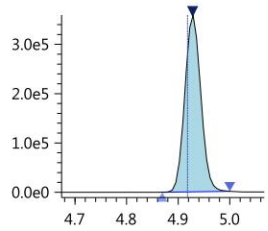
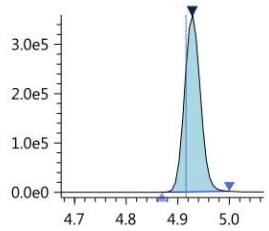
8_2-FTS-13C_IS
Conc 5.0000
RT 4.928 Area 773444
ISTD 528.80>509.00 (-) 3.60e5



8_2-FTS-13C
Conc 4.4968
RT 4.928 Area 773444
Q 528.80>509.00 (-) 3.60e5



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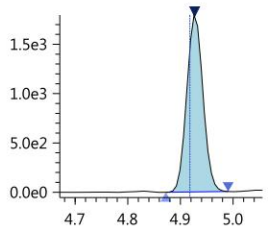
Conc 0.0261
RT 4.927 Area 3861
Q 527.10>506.90 (-) 1.80e3



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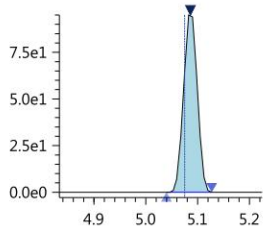
RT 5.086 Area 177
Q 599.00>79.90 (-) 9.50e1



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Conc 0.0007
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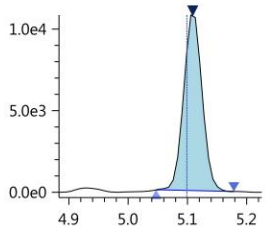
Q 563.00>518.90 (-) 1.09e4



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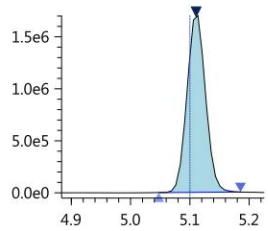
Conc 5.0000
RT 5.111 Area 3754233
ISTD 564.80>519.95 (-) 1.70e6



PFUnA-13C
Conc 3.0139
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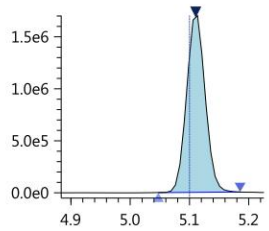
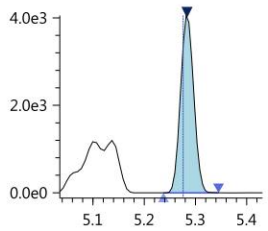
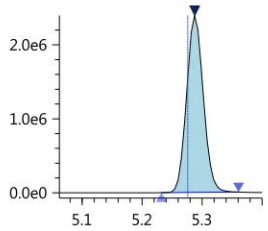
Q 564.80>519.95 (-) 1.70e6



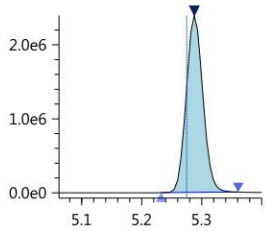
PFDoA
Conc 0.0030
RT 5.283 Area 7326
Q 613.05>569.00 (-) 4.05e3



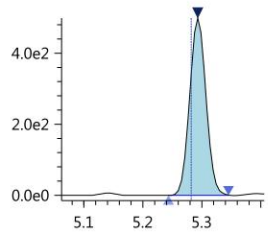
PFDoA-13C
Conc 2.5566
RT 5.288 Area 4638698
Q 614.80>569.95 (-) 2.40e6



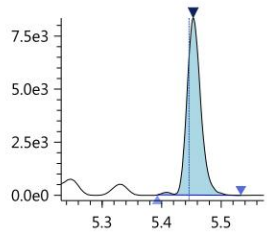
PFDoA-13C_IS
Conc 5.0000
RT 5.288 Area 4638698
ISTD 614.80>569.95 (-) 2.40e6



10_2-FtS_1
Conc 0.0054
RT 5.293 Area 963
Q 627.00>606.95 (-) 4.99e2



PFTrDA
Conc 0.0060
RT 5.453 Area 13608
Q 663.00>618.90 (-) 8.35e3



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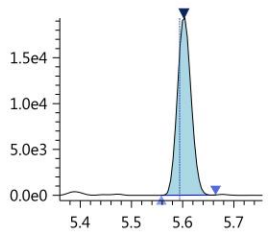
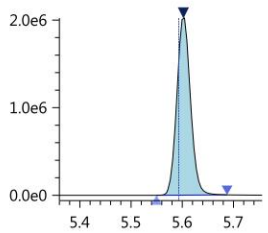
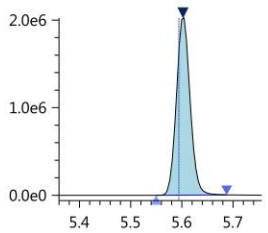
Conc 0.0015
RT 5.603 Area 36851
Q 713.40>669.00 (-) 1.93e4



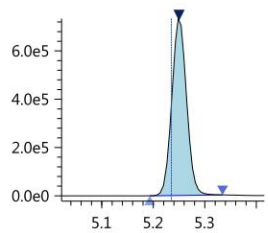
PFTeDA-13C
Conc 2.8166
RT 5.602 Area 3783864
Q 714.70>669.90 (-) 2.02e6



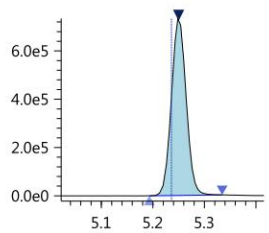
PFTeDA-13C_IS
Conc 5.0000
RT 5.602 Area 3783864
ISTD 714.70>669.90 (-) 2.02e6



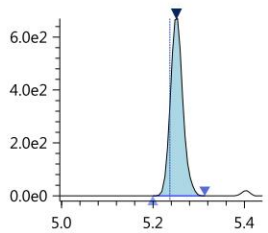
FOSA-13C_IS
Conc 5.0000
RT 5.250 Area 1460812
ISTD 506.00>78.05 (-) 7.34e5



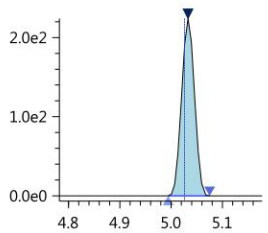
FOSA-13C
Conc 3.1346
RT 5.250 Area 1460812
Q 506.00>78.05 (-) 7.34e5



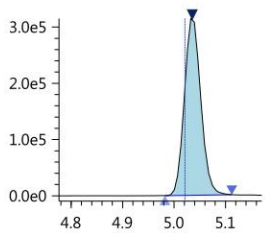
FOSA
Conc 0.0034
RT 5.251 Area 1296
Q 498.20>78.00 (-) 6.70e2



N-MeFOSAA
Conc 0.0046
RT 5.033 Area 394
Q 570.20>419.00 (-) 2.24e2



N-MeFOSAA-d3
Conc 2.0611
RT 5.035 Area 700948
Q 572.80>419.05 (-) 3.15e5



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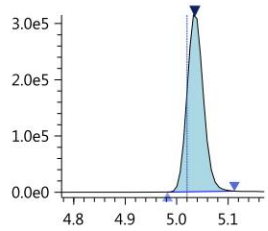
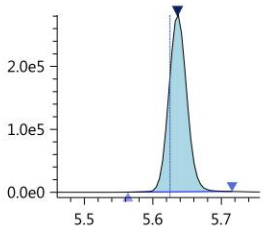
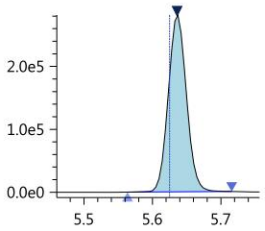
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.035 Area 700948
ISTD 572.80>419.05 (-) 3.15e5



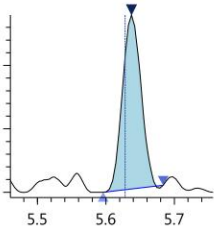
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.636 Area 520191
ISTD 514.90>168.90 (-) 2.82e5



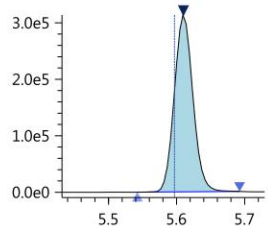
N-MeFOSA-d3
Conc 3.0716
RT 5.636 Area 520191
Q 514.90>168.90 (-) 2.82e5



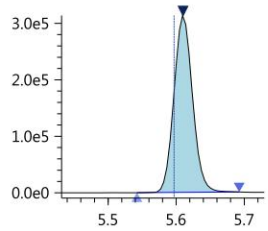
N-MeFOSA
Conc 0.0084
RT 5.637 Area 1037
Q 512.00>169.10 (-) 5.59e2



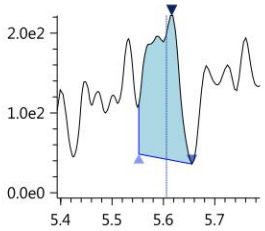
N-MeFOSE-d7
Conc 3.3290
RT 5.610 Area 596189
Q 622.70>59.10 (-) 3.14e5



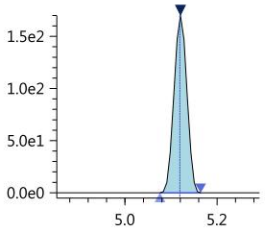
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.610 Area 596189
ISTD 622.70>59.10 (-) 3.14e5



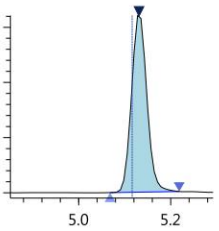
N-MeFOSE
Conc 0.0047
RT 5.616 Area 731
Q 616.00>59.00 (-) 2.22e2



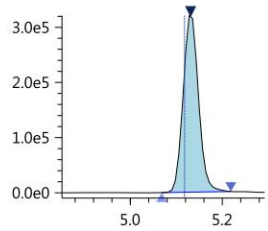
N-EtFOSAA
Conc 0.0038
RT 5.121 Area 333
Q 584.20>418.95 (-) 1.70e2



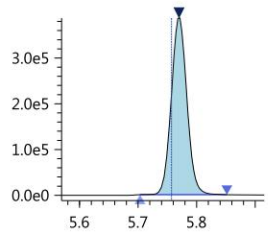
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.131 Area 748893
ISTD 588.80>419.00 (-) 3.21e5



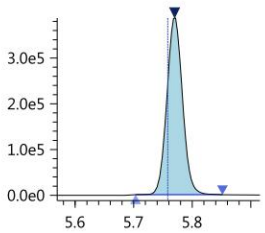
N-EtFOSAA-d5
Conc 2.2074
RT 5.131 Area 748893
Q 588.80>419.00 (-) 3.21e5



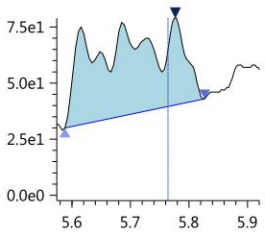
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.770 Area 722291
ISTD 530.90>169.15 (-) 3.87e5



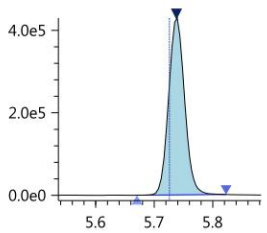
N-EtFOSA-d9
Conc 3.0802
RT 5.770 Area 722291
Q 530.90>169.15 (-) 3.87e5



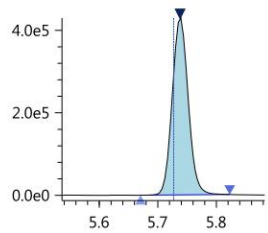
N-EtFOSA
Conc 0.0157
RT 5.777 Area 377
Q 526.90>169.10 (-) 7.90e1



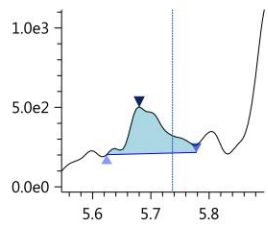
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.738 Area 816780
ISTD 638.70>59.10 (-) 4.30e5



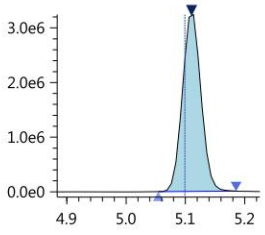
N-EtFOSE-d9
Conc 3.3042
RT 5.738 Area 816780
Q 638.70>59.10 (-) 4.30e5



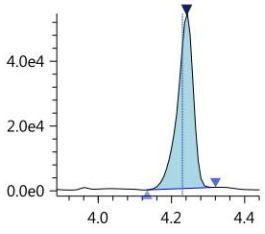
N-EtFOSE
Conc 0.0083
RT 5.680 Area 1266
Q 630.00>58.90 (-) 1.12e3



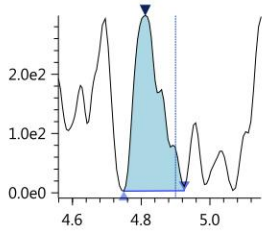
13C7-PFUnDA_IS
Conc 5.0000
RT 5.110 Area 7169881
ISTD 570.00>525.00 (-) 3.24e6



PFPeS
Conc 2.5460
RT 4.242 Area 161332
Q 349.00>99.00 (-) 5.47e4



PFNS
Conc 0.0186
RT 4.812 Area 1588
Q 549.00>99.00 (-) 2.99e2



1st EJD 03/28/19
2nd 03/28/19

Validation Report

Data File: J:\LCMS06\Data\190325_b6\190325_014
Lab ID: K1902064-007
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/25/19 11:27
Batch ID: 629106
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	18O2-PFHxS	138	70	130	narrate native ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

Data File:	J:\LCMS06\Data\190325_b6\190325_014	**Instrument:**	K-LCMS-06
Acqu Date:	3/25/19 11:27	**Vial:**	3
Run Type:	N/A	**Dilution:**	10
Lab ID:	K1902064-007	**Raw Units:**	ng/mL

Bottle ID:	K1902064-007.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629106	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.086	+0.00	5931861	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
18O2-PFHxS	4.386	-0.01	43698	0.4106	82	26 - 122	N
13C4-PFOS	4.708	0.00	44824	0.3550	71	25 - 121	N
13C5-PFPeA	3.945	+0.00	144908	0.4232	85	27 - 138	Y
13C2-PFHxA	4.210	0.00	402865	0.3815	76	28 - 132	Y
13C4-PFHpA	4.390	0.00	491524	0.4526	91	19 - 139	Y
13C2-6:2 FTS	4.550	+0.00	69647	0.5710	114	10 - 226	N

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorohexane sulfonic acid (PFHxS)	4.388	0.00	54179	5.6971	140		N
Perfluorooctane sulfonic acid (PFOS)	4.707	0.00	1421	0.2327	5.8	J	N
Perfluoropentanoic acid (PFPeA)	3.945	+0.00	3094853	46.4793	1200		Y
Perfluorohexanoic acid (PFHxA)	4.211	+0.00	3072388	42.7212	1100		Y
Perfluoroheptanoic acid (PFHpA)	4.392		3532996	45.6953	1100		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.544	0.00	2111	0.1433	3.6	U	N

Prep Amount:	320.0000 mL	**Dilution:**	10
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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\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Insight Report

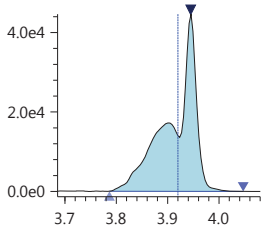
Printed at 3/28/2019 2:02:44 PM

190325_014

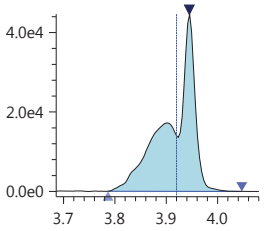
Sample ID: K1902064-007
Date acquired: 3/25/2019 11:27:23 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_014.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFPeA-13C_IS	Auto	3.945	144908	144908	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.945	144908	5931861	26	0.4232	ng/mL	----
PFPeA	Auto	3.945	3094853	144908	4	46.4793	ng/mL	----
PFHxA-13C_IS	Auto	4.210	402865	402865	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.210	402865	5931861	26	0.3815	ng/mL	----
PFHxA	Auto	4.211	3072388	402865	6	42.7212	ng/mL	----
PFHpA	Auto	4.392	3532996	491524	8	45.6953	ng/mL	----
PFHpA-13C_IS	Auto	4.390	491524	491524	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.390	491524	5931861	26	0.4526	ng/mL	----
PFHxS-18O_IS	Auto	4.386	43698	43698	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.386	43698	5931861	26	0.4106	ng/mL	----
PFHxS_1	Auto	4.388	54179	43698	7	5.6971	ng/mL	----
6_2-FTS-13C	Auto	4.550	69647	5931861	26	0.5710	ng/mL	----
6_2-FTS-13C_IS	Auto	4.550	69647	69647	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.544	2111	69647	10	0.1433	ng/mL	----
PFOS_1	M	4.707	1421	44824	13	0.2327	ng/mL	----
PFOS-13C_IS	Auto	4.708	44824	44824	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.708	44824	5931861	26	0.3550	ng/mL	----
13C7-PFUnDA_IS	Auto	5.086	5931861	5931861	26	5.0000	ng/mL	----

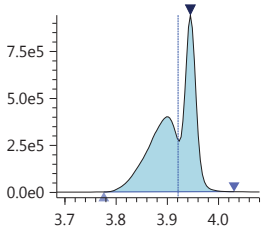
PFPeA-13C_IS
Conc 5.0000
RT 3.945 Area 144908
ISTD 267.90>223.00 (-) 4.46e4



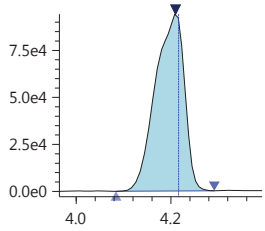
PFPeA-13C
Conc 0.4232
RT 3.945 Area 144908
Q 267.90>223.00 (-) 4.46e4



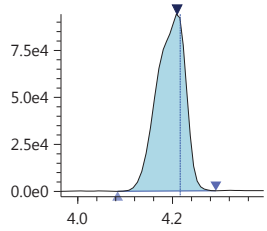
PFPeA
Conc 46.4793
RT 3.945 Area 3094853
Q 263.05>219.10 (-) 9.43e5



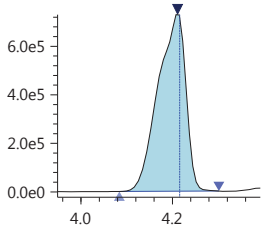
PFHxA-13C_IS
Conc 5.0000
RT 4.210 Area 402865
ISTD 314.90>270.10 (-) 9.43e4



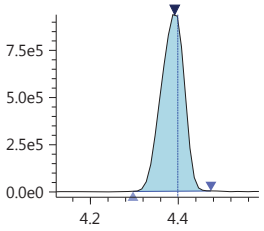
PFHxA-13C
Conc 0.3815
RT 4.210 Area 402865
Q 314.90>270.10 (-) 9.43e4



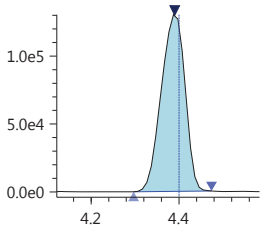
PFHxA
Conc 42.7212
RT 4.211 Area 3072388
Q 313.00>269.00 (-) 7.30e5



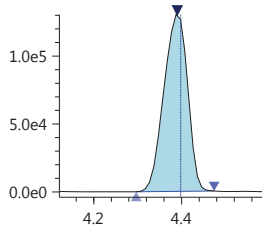
PFHpA
Conc 45.6953
RT 4.392 Area 3532996
Q 362.90>319.00 (-) 9.40e5



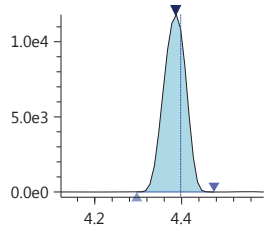
PFHpA-13C_IS
Conc 5.0000
RT 4.390 Area 491524
ISTD 366.90>322.10 (-) 1.30e5



PFHpA-13C
Conc 0.4526
RT 4.390 Area 491524
Q 366.90>322.10 (-) 1.30e5



PFHxS-18O_IS
Conc 5.0000
RT 4.386 Area 43698
ISTD 402.70>84.05 (-) 1.18e4



Insight Report

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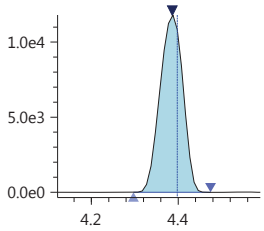
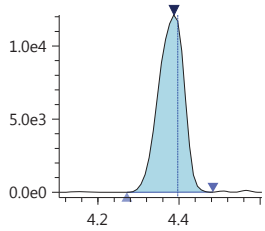
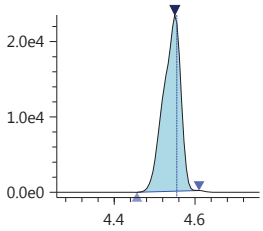
PFHxS-18O
Conc 0.4106
RT 4.386 Area 43698
Q 402.70>84.05 (-) 1.18e4



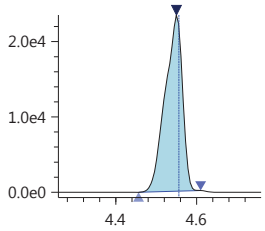
PFHxS_1
Conc 5.6971
RT 4.388 Area 54179
Q 399.00>80.00 (-) 1.21e4



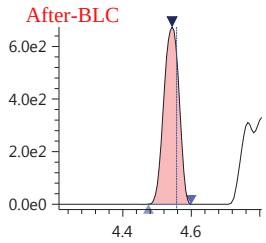
6_2-FTS-13C
Conc 0.5710
RT 4.550 Area 69647
Q 428.90>409.00 (-) 2.35e4



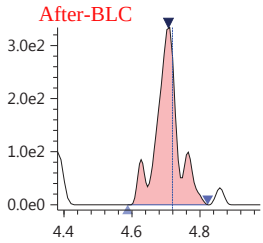
6_2-FTS-13C_IS
Conc 5.0000
RT 4.550 Area 69647
ISTD 428.90>409.00 (-) 2.35e4



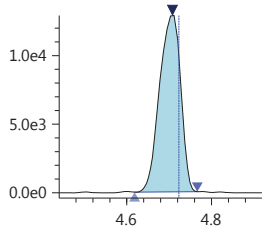
6_2-FTS_1
Conc 0.1433
RT 4.544 Area 2111
Q 427.00>407.00 (-) 6.74e2



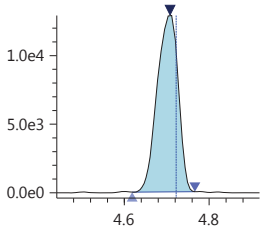
PFOS_1
Conc 0.2327
RT 4.707 Area 1421
Q 499.00>80.00 (-) 3.34e2



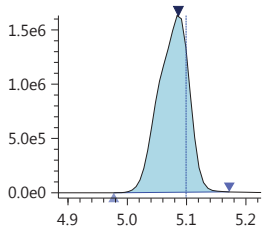
PFOS-13C_IS
Conc 5.0000
RT 4.708 Area 44824
ISTD 502.80>80.05 (-) 1.29e4



PFOS-13C
Conc 0.3550
RT 4.708 Area 44824
Q 502.80>80.05 (-) 1.29e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.086 Area 5931861
ISTD 570.00>525.00 (-) 1.63e6



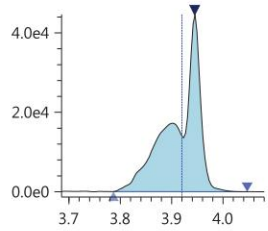
Insight Report

Printed at 3/28/2019 1:52:07 PM

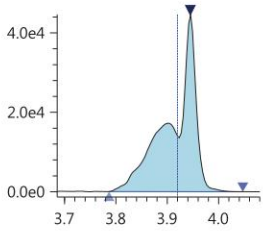
190325_014

Sample ID: K1902064-007
Date acquired: 3/25/2019 11:27:23 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_014.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 2

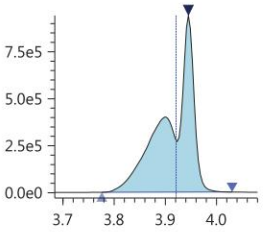
PFPeA-13C_IS
Conc 5.0000
RT 3.945 Area 144908
ISTD 267.90>223.00 (-) 4.46e4



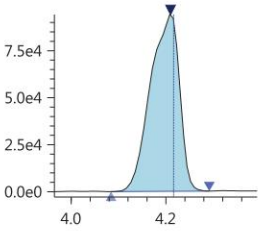
PFPeA-13C
Conc 0.4232
RT 3.945 Area 144908
Q 267.90>223.00 (-) 4.46e4



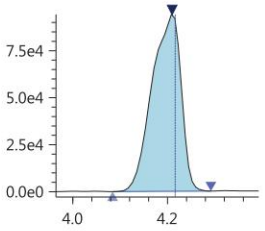
PFPeA
Conc 46.4793
RT 3.945 Area 3094853
Q 263.05>219.10 (-) 9.43e5



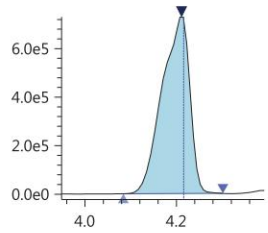
PFHxA-13C_IS
Conc 5.0000
RT 4.210 Area 402865
ISTD 314.90>270.10 (-) 9.43e4



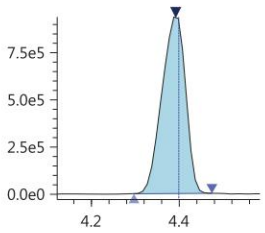
PFHxA-13C
Conc 0.3815
RT 4.210 Area 402865
Q 314.90>270.10 (-) 9.43e4



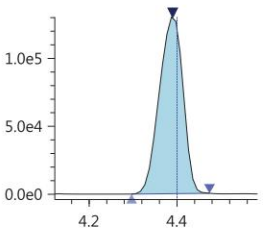
PFHxA
Conc 42.7212
RT 4.211 Area 3072388
Q 313.00>269.00 (-) 7.30e5



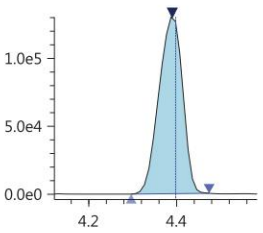
PFHpA
Conc 45.6953
RT 4.392 Area 3532996
Q 362.90>319.00 (-) 9.40e5



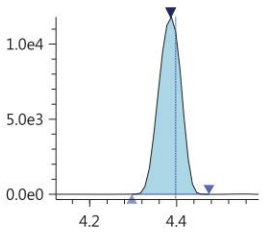
PFHpA-13C_IS
Conc 5.0000
RT 4.390 Area 491524
ISTD 366.90>322.10 (-) 1.30e5



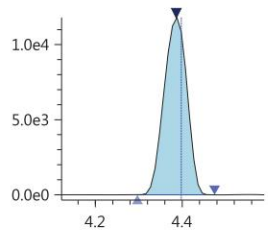
PFHpA-13C
Conc 0.4526
RT 4.390 Area 491524
Q 366.90>322.10 (-) 1.30e5



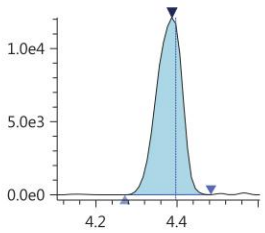
PFHxS-18O_IS
Conc 5.0000
RT 4.386 Area 43698
ISTD 402.70>84.05 (-) 1.18e4



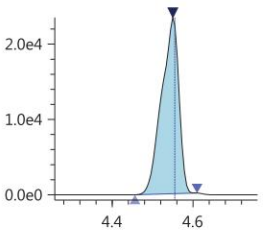
PFHxS-18O
Conc 0.4106
RT 4.386 Area 43698
Q 402.70>84.05 (-) 1.18e4



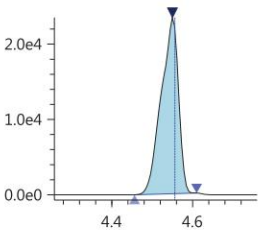
PFHxS_1
Conc 5.6971
RT 4.388 Area 54179
Q 399.00>80.00 (-) 1.21e4



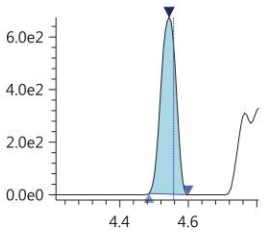
6_2-FTS-13C
Conc 0.5710
RT 4.550 Area 69647
Q 428.90>409.00 (-) 2.35e4



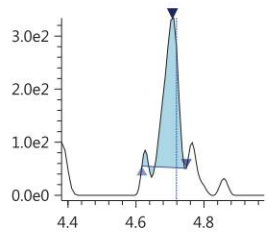
6_2-FTS-13C_IS
Conc 5.0000
RT 4.550 Area 69647
ISTD 428.90>409.00 (-) 2.35e4



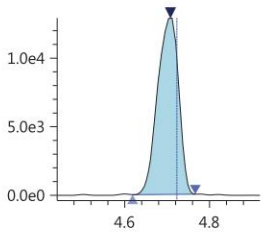
6_2-FTS_1
Conc 0.1421
RT 4.544 Area 2093
Q 427.00>407.00 (-) 6.74e2



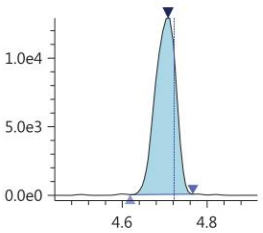
PFOS_1
Conc 0.1289
RT 4.707 Area 787
Q 499.00>80.00 (-) 3.34e2



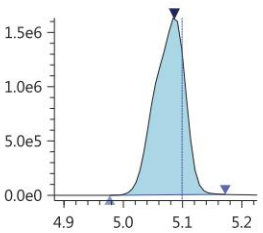
PFOS-13C_IS
Conc 5.0000
RT 4.708 Area 44824
ISTD 502.80>80.05 (-) 1.29e4



PFOS-13C
Conc 0.3550
RT 4.708 Area 44824
Q 502.80>80.05 (-) 1.29e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.086 Area 5931861
ISTD 570.00>525.00 (-) 1.63e6



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_024
Lab ID: K1902064-008
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 13:58
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Printed: 3/21/19 10:05
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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_024	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:58	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-008	**Raw Units:**	ng/mL

Bottle ID:	K1902064-008.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.118	+0.00	7393806	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.011	0.00	458364	2.3765	48	20 - 109	Y
18O2-PFHxS	4.416	+0.01	383282	2.8890	58	26 - 122	Y
13C4-PFOS	4.746	+0.01	597247	3.7944	76	25 - 121	Y
13C4-PFBA	3.354	0.00	2209865	3.3563	67	27 - 124	Y
13C5-PFPeA	3.962	+0.00	1544044	3.6176	72	27 - 138	Y
13C2-PFHxA	4.233	+0.00	4273935	3.2471	65	28 - 132	Y
13C4-PFHpA	4.419	+0.01	3809426	2.8140	56	19 - 139	Y
13C4-PFOA	4.582	+0.01	4801184	3.5582	71	22 - 130	Y
13C5-PFNA	4.762	+0.01	4891024	3.2319	65	20 - 127	Y
13C2-PFDA	4.940	+0.01	4521291	3.1670	63	24 - 125	Y
13C2-PFUnDA	5.118	+0.00	3837365	2.9873	60	22 - 125	Y
13C2-PFDoDA	5.293	+0.01	4718010	2.5215	50	19 - 122	Y
13C2-PFTeDA	5.608	+0.01	3639677	2.6272	53	13 - 124	Y
13C8-FOSA	5.256	+0.01	1528826	3.1812	64	18 - 109	Y
D3-MeFOSAA	5.043	+0.01	683394	1.9487	39	9 - 123	Y
D5-EtFOSAA	5.138	+0.01	715229	2.0443	41	12 - 126	Y
13C2-6:2 FTS	4.573	+0.01	1153855	7.5900	152	10 - 226	Y
13C2-8:2 FTS	4.938	+0.01	777609	4.3841	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)	4.010	0.00	29739	0.3023	7.8		Y
Perfluorohexane sulfonic acid (PFHxS)	4.413	+0.00	58955	0.7068	18		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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_024	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 13:58	**Vial:**	10
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-008	**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)	4.572	+0.00	7622	0.0809	2.1	J	Y
Perfluorooctane sulfonic acid (PFOS)	4.746	+0.01	457256	5.6198	150		Y
Perfluorodecane sulfonic acid (PFDS)	5.112	+0.02	88	0.0009	0.023	U	Y
Perfluorobutanoic acid (PFBA)	3.355	0.00	834841	1.9946	51		Y
Perfluoropentanoic acid (PFPeA)	3.962	+0.00	3464729	4.7700	120		Y
Perfluorohexanoic acid (PFHxA)	4.233	+0.00	2783052	3.6156	93		Y
Perfluoroheptanoic acid (PFHpA)	4.419	+0.01	1101729	1.8003	46		Y
Perfluorooctanoic acid (PFOA)	4.582	+0.01	473794	0.5735	15		Y
Perfluorononanoic acid (PFNA)	4.763	+0.01	276688	0.3984	10		Y
Perfluorodecanoic acid (PFDA)	4.939	+0.01	126951	0.1721	4.4		Y
Perfluoroundecanoic acid (PFUnDA)	5.117	+0.00	43473	0.0332	0.86	U	Y
Perfluorododecanoic acid (PFDoDA)	5.293	+0.01	13671	0.0140	0.36	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.459	+0.00	10672	0.0023	0.059	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.607	+0.01	36774	0.0068	0.18	U	Y
Perfluorooctane sulfonamide (FOSA)	5.256	+0.01	2337	0.0058	0.15	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.042	+0.00	406	0.0048	0.12	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.100	-0.04	557	0.0067	0.17	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.573	+0.01	26877	0.1102	2.8	J	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.937	+0.01	363694	2.4455	63		Y

Prep Amount:	310.0000 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 3/21/2019 9:48:23 AM

190319_024

Sample ID: K1902064-008
Date acquired: 3/19/2019 1:58:14 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_024.lcd
Vial: 10 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.354	2209865	2209865	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.354	2209865	7393806	26	3.3563	ng/mL	----
PFBA	Auto	3.355	834841	2209865	2	1.9946	ng/mL	----
PFPeA-13C_IS	Auto	3.962	1544044	1544044	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.962	1544044	7393806	26	3.6176	ng/mL	----
PFPeA	Auto	3.962	3464729	1544044	4	4.7700	ng/mL	----
PFBS_1	Auto	4.010	29739	458364	16	0.3023	ng/mL	----
PFBS-13C	Auto	4.011	458364	7393806	26	2.3765	ng/mL	----
PFBS-13C_IS	Auto	4.011	458364	458364	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.233	4273935	4273935	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.233	4273935	7393806	26	3.2471	ng/mL	----
PFHxA	Auto	4.233	2783052	4273935	6	3.6156	ng/mL	----
PFHpA	Auto	4.419	1101729	3809426	8	1.8003	ng/mL	----
PFHpA-13C_IS	Auto	4.419	3809426	3809426	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.419	3809426	7393806	26	2.8140	ng/mL	----
PFHxS-18O_IS	Auto	4.416	383282	383282	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.416	383282	7393806	26	2.8890	ng/mL	----
PFHxS_1	Auto	4.413	58955	383282	7	0.7068	ng/mL	----
6_2-FTS-13C	Auto	4.573	1153855	7393806	26	7.5900	ng/mL	----
6_2-FTS-13C_IS	Auto	4.573	1153855	1153855	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.573	26877	1153855	10	0.1102	ng/mL	----
PFHpS_1	M	4.572	7622	383282	7	0.0809	ng/mL	----
PFOA-13C_IS	Auto	4.582	4801184	4801184	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.582	4801184	7393806	26	3.5582	ng/mL	----
PFOA	Auto	4.582	473794	4801184	9	0.5735	ng/mL	----
PFOS_1	M	4.746	457256	597247	13	5.6198	ng/mL	----
PFOS-13C_IS	Auto	4.746	597247	597247	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.746	597247	7393806	26	3.7944	ng/mL	----
PFNA-13C_IS	Auto	4.762	4891024	4891024	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.762	4891024	7393806	26	3.2319	ng/mL	----
PFNA	Auto	4.763	276688	4891024	11	0.3984	ng/mL	----
PFDA-13C_IS	Auto	4.940	4521291	4521291	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.940	4521291	7393806	26	3.1670	ng/mL	----
PFDA	Auto	4.939	126951	4521291	12	0.1721	ng/mL	----
8_2-FTS-13C_IS	Auto	4.938	777609	777609	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.938	777609	7393806	26	4.3841	ng/mL	----
8_2-FTS_1	Auto	4.937	363694	777609	15	2.4455	ng/mL	----
PFUnA	M	5.117	43473	3837365	14	0.0332	ng/mL	----
PFUnA-13C_IS	Auto	5.118	3837365	3837365	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.118	3837365	7393806	26	2.9873	ng/mL	----
PFDoA	Auto	5.293	13671	4718010	17	0.0140	ng/mL	----
PFDoA-13C	Auto	5.293	4718010	7393806	26	2.5215	ng/mL	----
PFDoA-13C_IS	Auto	5.293	4718010	4718010	17	5.0000	ng/mL	----
PFTrDA	Auto	5.459	10672	3639677	22	0.0023	ng/mL	----
PFTeDA	Auto	5.607	36774	3639677	22	0.0068	ng/mL	----
PFTeDA-13C	Auto	5.608	3639677	7393806	26	2.6272	ng/mL	----
PFTeDA-13C_IS	Auto	5.608	3639677	3639677	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.256	1528826	1528826	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.256	1528826	7393806	26	3.1812	ng/mL	----
FOSA	M	5.256	2337	1528826	18	0.0058	ng/mL	----
N-MeFOSAA	Auto	5.042	406	683394	19	0.0048	ng/mL	----
N-MeFOSAA-d3	Auto	5.043	683394	7393806	26	1.9487	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.043	683394	683394	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.100	557	715229	21	0.0067	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.138	715229	715229	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.138	715229	7393806	26	2.0443	ng/mL	----
13C7-PFUnDA_IS	Auto	5.118	7393806	7393806	26	5.0000	ng/mL	----

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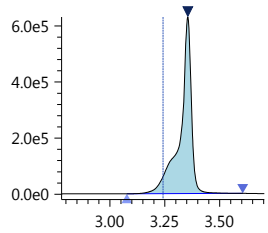
PFBA-13C_IS
Conc 5.0000
RT 3.354 Area 2209865
ISTD 216.90>172.15 (-) 6.32e5



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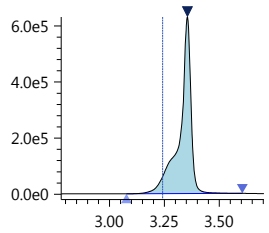
RT 3.354 Area 2209865
Q 216.90>172.15 (-) 6.32e5



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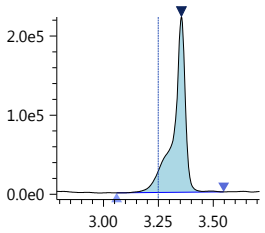
Conc 1.9946
RT 3.355 Area 834841
Q 213.00>169.10 (-) 2.24e5



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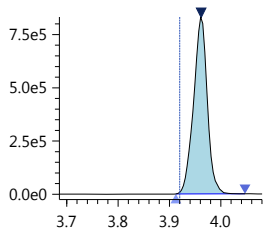
RT 3.962 Area 1544044
ISTD 267.90>223.00 (-) 8.33e5



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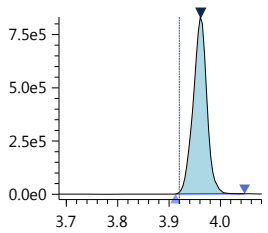

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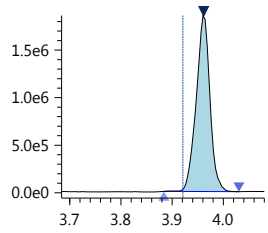
Q 263.05>219.10 (-) 1.86e6



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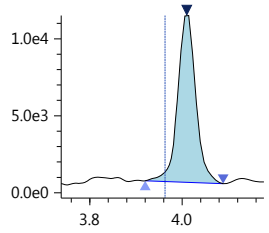
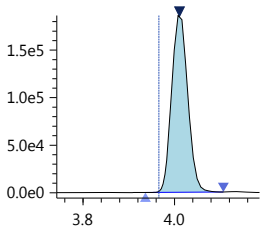
Conc 0.3023
RT 4.010 Area 29739
Q 299.00>80.00 (-) 1.15e4



PFBS-13C
Conc 2.3765
RT 4.011 Area 458364
Q 301.80>80.00 (-) 1.86e5



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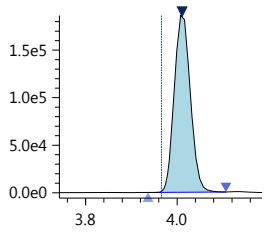

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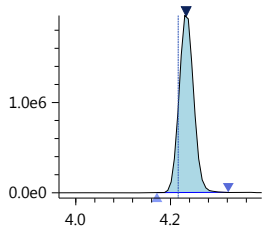

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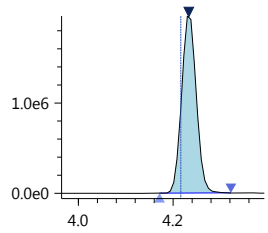

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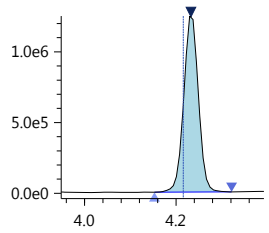
Q 313.00>269.00 (-) 1.25e6



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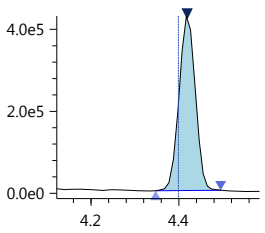
Q 362.90>319.00 (-) 4.33e5



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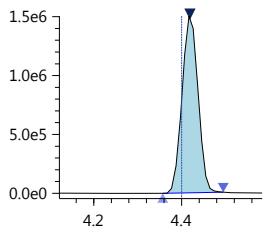
Conc 5.0000
RT 4.419 Area 3809426
ISTD 366.90>322.10 (-) 1.51e6



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Conc 2.8140
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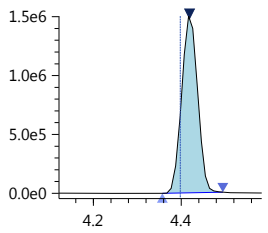
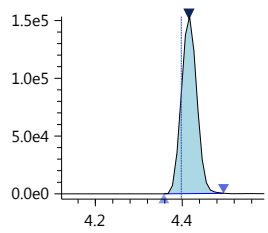


PFHxS-18O_IS
Conc 5.0000
RT 4.416 Area 383282
ISTD 402.70>84.05 (-) 1.53e5



PFHxS-18O
Conc 2.8890
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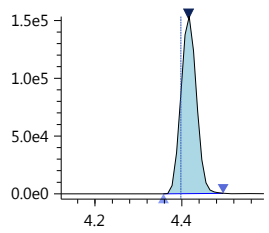

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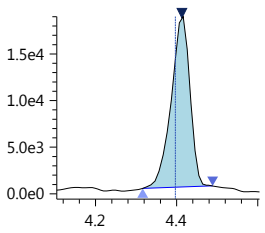

6_2-FTS-13C
Conc 7.5900
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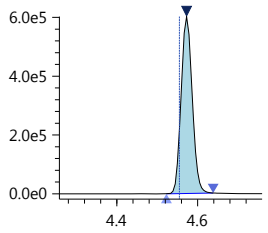

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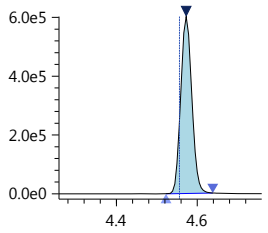

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6_2-FTS_1
Conc 0.1102
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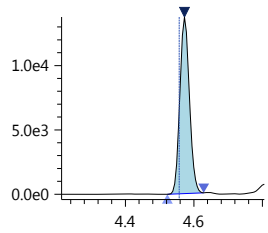
Q 427.00>407.00 (-) 1.38e4



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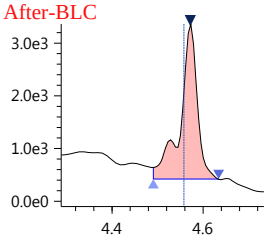

PFOA-13C_IS
Conc 5.0000
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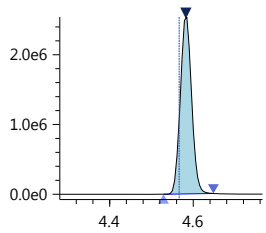
ISTD 416.80>372.05 (-) 2.54e6



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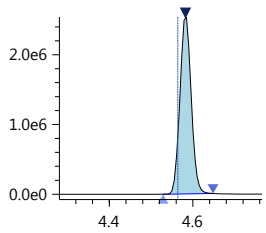

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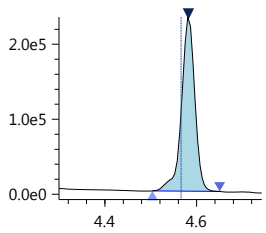

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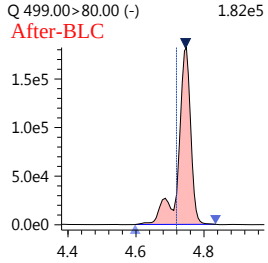

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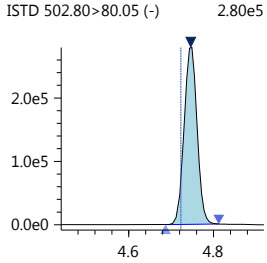

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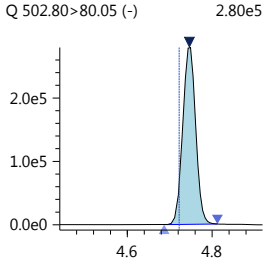

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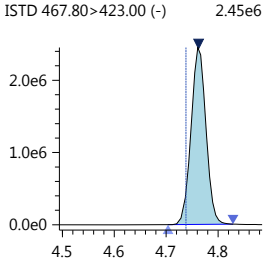
ISTD 467.80>423.00 (-) 2.45e6



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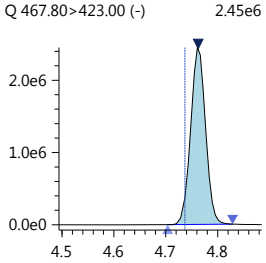

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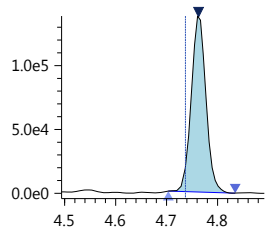
Q 463.00>418.90 (-) 1.39e5



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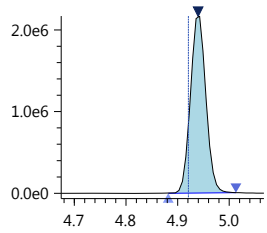
ISTD 514.80>469.95 (-) 2.17e6



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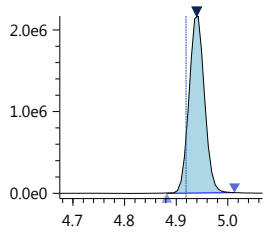

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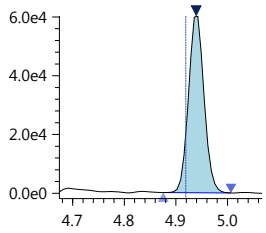
Q 513.00>468.80 (-) 6.03e4



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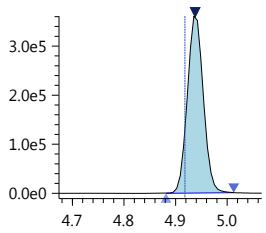
ISTD 528.80>509.00 (-) 3.61e5



8_2-FTS-13C
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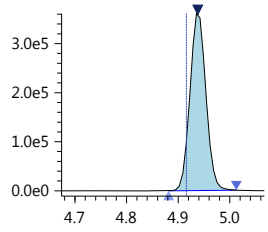
RT 4.938 Area 777609
Q 528.80>509.00 (-) 3.61e5



8_2-FTS_1
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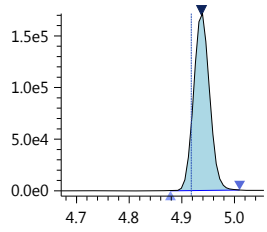
Q 527.10>506.90 (-) 1.72e5



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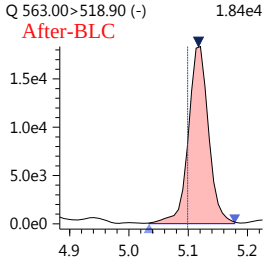
Conc 0.0332
RT 5.117 Area 43473
Q 563.00>518.90 (-) 1.84e4



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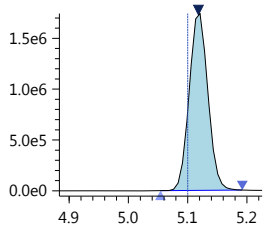
ISTD 564.80>519.95 (-) 1.74e6



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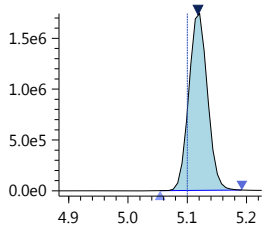

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Conc 0.0140
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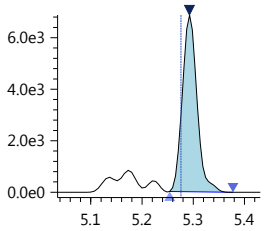
Q 613.05>569.00 (-) 6.88e3



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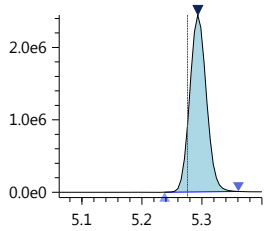
Q 614.80>569.95 (-) 2.45e6



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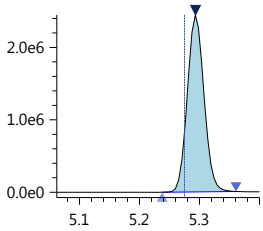
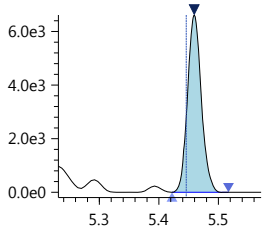
ISTD 614.80>569.95 (-) 2.45e6



PFTrDA
Conc 0.0023
RT 5.459 Area 10672
Q 663.00>618.90 (-) 6.62e3



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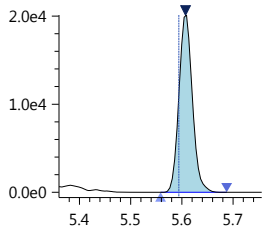
Conc 0.0068
RT 5.607 Area 36774
Q 713.40>669.00 (-) 2.01e4



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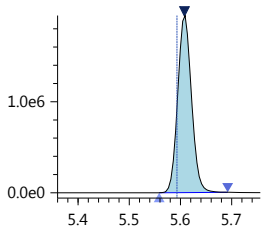
Conc 2.6272
RT 5.608 Area 3639677
Q 714.70>669.90 (-) 1.95e6



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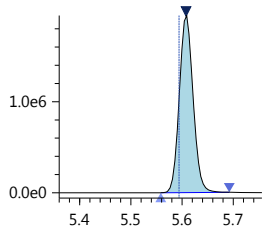

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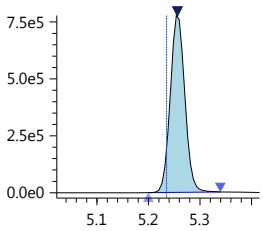
ISTD 506.00>78.05 (-) 7.78e5



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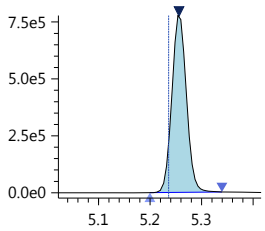
Q 506.00>78.05 (-) 7.78e5



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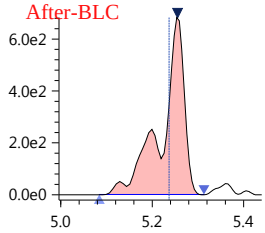
Conc 0.0058
RT 5.256 Area 2337
Q 498.20>78.00 (-) 6.83e2



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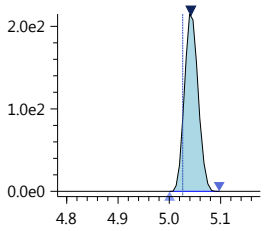
Conc 0.0048
RT 5.042 Area 406
Q 570.20>419.00 (-) 2.15e2



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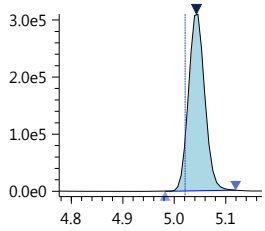
Conc 1.9487
RT 5.043 Area 683394
Q 572.80>419.05 (-) 3.10e5



N-MeFOSAA-d3_IS
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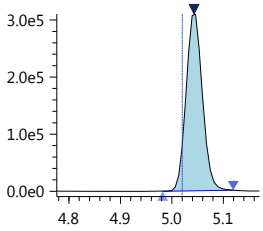
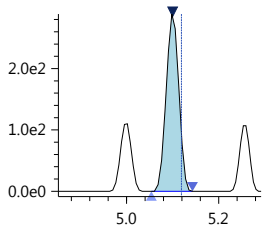
RT 5.043 Area 683394
ISTD 572.80>419.05 (-) 3.10e5



N-EtFOSAA
Conc 0.0067
RT 5.100 Area 557
Q 584.20>418.95 (-) 2.89e2



N-EtFOSAA-d5_IS
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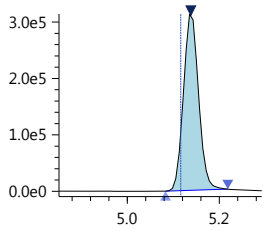
RT 5.138 Area 715229
ISTD 588.80>419.00 (-) 3.14e5



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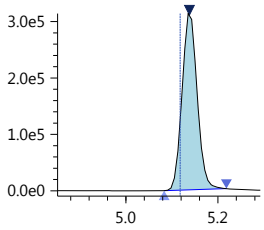

13C7-PFUnDA_IS
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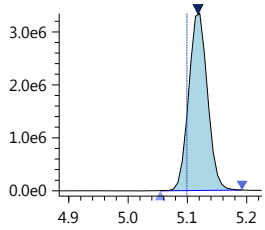
RT 5.118 Area 7393806
ISTD 570.00>525.00 (-) 3.35e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

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Date acquired: 3/19/2019 1:58:14 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_024.lcd
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PFBA-13C_IS
Conc 5.0000
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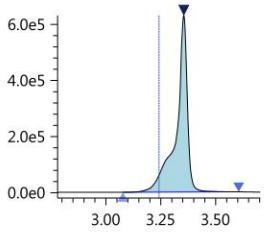

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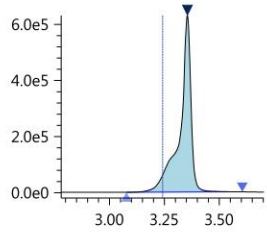

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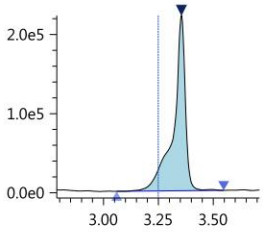

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Conc 5.0000
RT 3.962 Area 1544044
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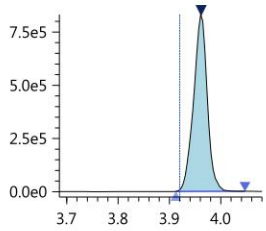

PFPeA-13C
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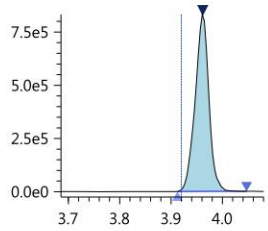

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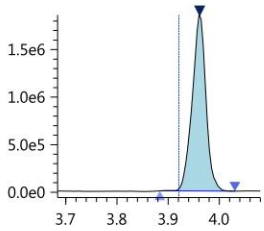

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Conc 0.3023
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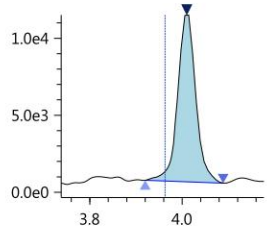
Q 299.00>80.00 (-) 1.15e4



PFBS-13C
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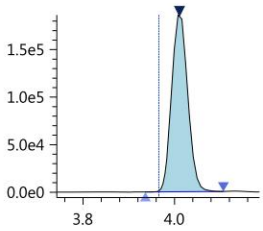
Q 301.80>80.00 (-) 1.86e5



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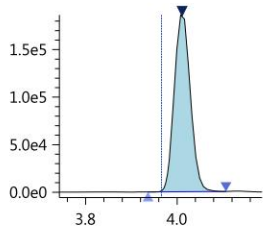

PFHxA-13C_IS
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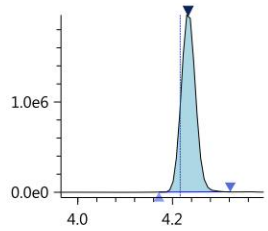
RT 4.233 Area 4273935
ISTD 314.90>270.10 (-) 1.96e6



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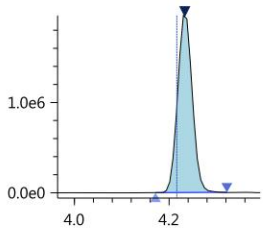
Q 314.90>270.10 (-) 1.96e6



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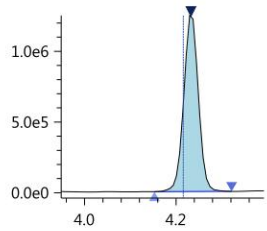
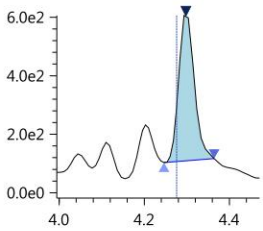
RT 4.233 Area 2783052
Q 313.00>269.00 (-) 1.25e6



HPFO_DA
Conc 0.0065
RT 4.298 Area 1284
Q 329.00>169.00 (-) 6.06e2



HFPO_DA-13C_IS
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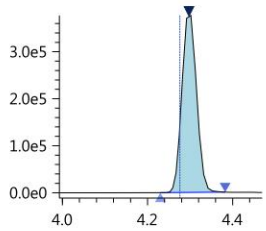
RT 4.297 Area 917633
ISTD 332.00>286.80 (-) 3.77e5



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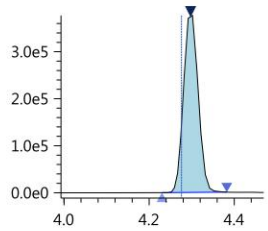

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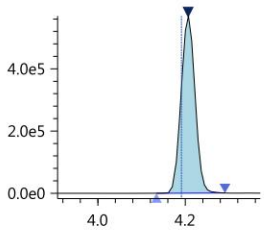
RT 4.206 Area 1259109
ISTD 328.80>309.05 (-) 5.70e5



4_2-FTS-13C
Conc 7.3270
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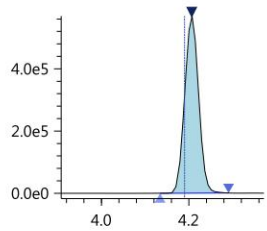
Q 328.80>309.05 (-) 5.70e5



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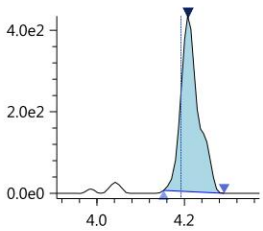
RT 4.208 Area 1209
Q 327.00>307.05 (-) 4.35e2



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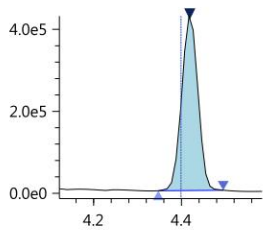
RT 4.419 Area 1101729
Q 362.90>319.00 (-) 4.33e5



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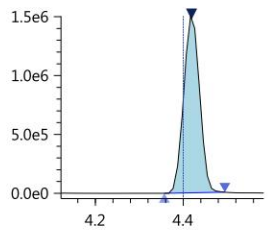

Insight Report

Printed at 3/21/2019 9:16:10 AM

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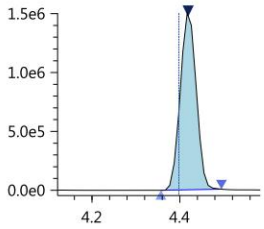

PFHxS-18O_IS
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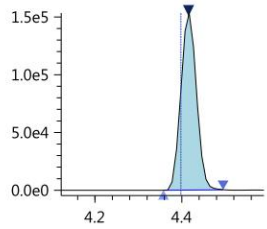
ISTD 402.70>84.05 (-) 1.53e5



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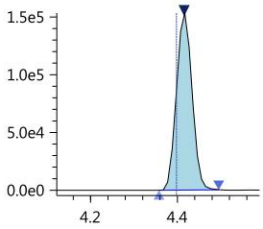

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Conc 0.7068
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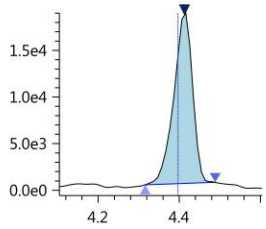
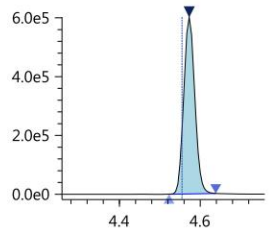
Q 399.00>80.00 (-) 1.90e4



6_2-FTS-13C
Conc 7.5900
RT 4.573 Area 1153855
Q 428.90>409.00 (-) 6.03e5



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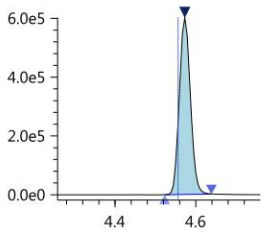
ISTD 428.90>409.00 (-) 6.03e5



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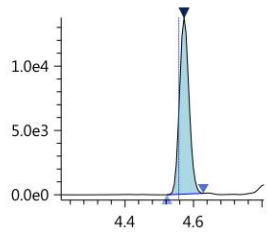
Q 427.00>407.00 (-) 1.38e4



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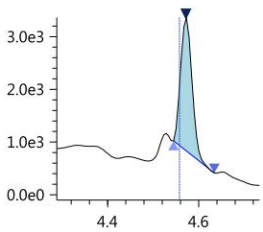
Q 449.00>80.15 (-) 3.36e3



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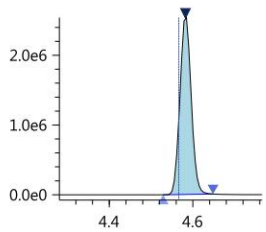

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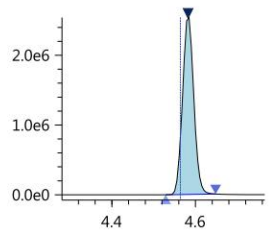
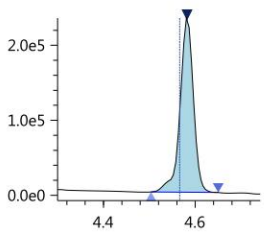
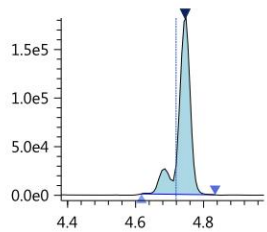
Q 416.80>372.05 (-) 2.54e6



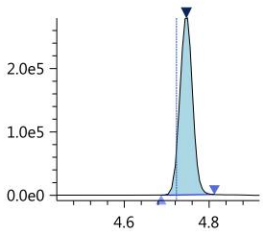
PFOA
Conc 0.5735
RT 4.582 Area 473794
Q 413.00>369.00 (-) 2.36e5



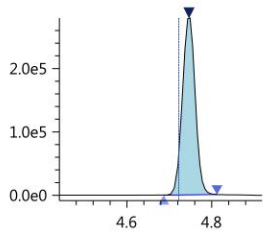
PFOS_1
Conc 5.5130
RT 4.746 Area 448566
Q 499.00>80.00 (-) 1.82e5



PFOS-13C_IS
Conc 5.0000
RT 4.746 Area 597247
ISTD 502.80>80.05 (-) 2.80e5



PFOS-13C
Conc 3.7944
RT 4.746 Area 597247
Q 502.80>80.05 (-) 2.80e5



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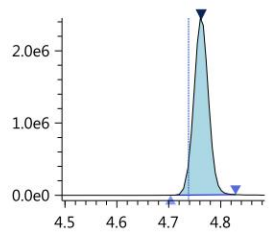
Conc 5.0000
RT 4.762 Area 4891024
ISTD 467.80>423.00 (-) 2.45e6



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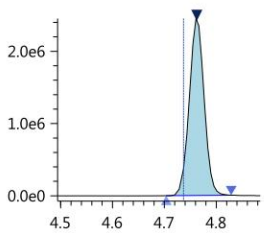
Conc 3.2319
RT 4.762 Area 4891024
Q 467.80>423.00 (-) 2.45e6



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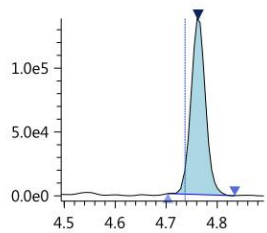
Conc 0.3984
RT 4.763 Area 276688
Q 463.00>418.90 (-) 1.39e5



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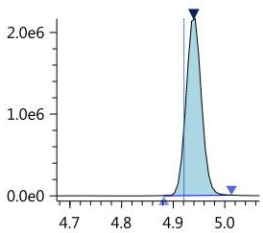
Conc 5.0000
RT 4.940 Area 4521291
ISTD 514.80>469.95 (-) 2.17e6



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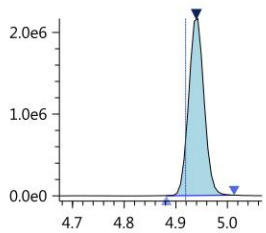
RT 4.940 Area 4521291
Q 514.80>469.95 (-) 2.17e6



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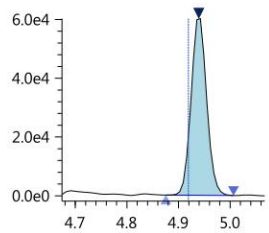
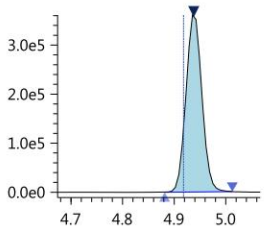
RT 4.939 Area 126951
Q 513.00>468.80 (-) 6.03e4



Insight Report

8_2-FTS-13C_IS
Conc 5.0000
RT 4.938 Area 777609
ISTD 528.80>509.00 (-) 3.61e5



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Conc 4.3841
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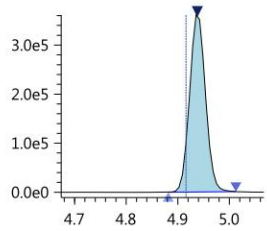
Q 528.80>509.00 (-) 3.61e5



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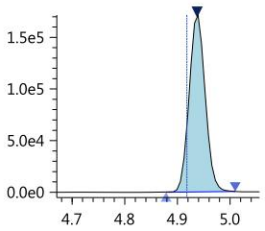
RT 4.937 Area 363694
Q 527.10>506.90 (-) 1.72e5



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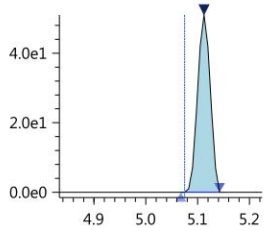
RT 5.112 Area 88
Q 599.00>79.90 (-) 5.10e1



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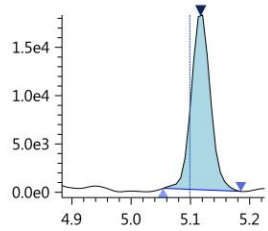
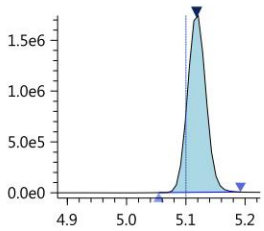
Conc 0.0298
RT 5.117 Area 41445
Q 563.00>518.90 (-) 1.84e4



PFUnA-13C_IS
Conc 5.0000
RT 5.118 Area 3837365
ISTD 564.80>519.95 (-) 1.74e6



PFUnA-13C
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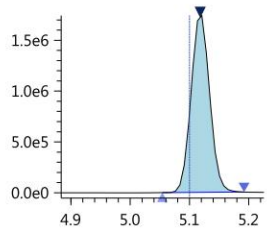
Q 564.80>519.95 (-) 1.74e6



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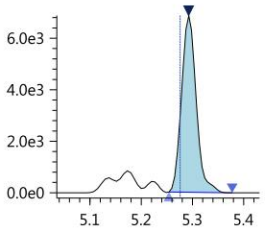
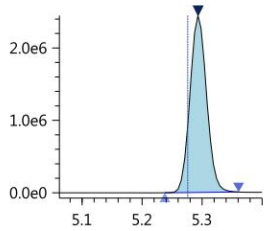
Conc 0.0140
RT 5.293 Area 13671
Q 613.05>569.00 (-) 6.88e3



PFDoA-13C
Conc 2.5215
RT 5.293 Area 4718010
Q 614.80>569.95 (-) 2.45e6



PFDoA-13C_IS
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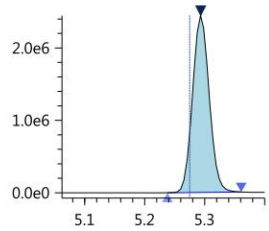
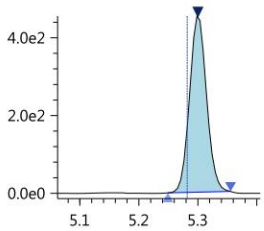
ISTD 614.80>569.95 (-) 2.45e6



10_2-FtS_1
Conc 0.0051
RT 5.300 Area 911
Q 627.00>606.95 (-) 4.56e2



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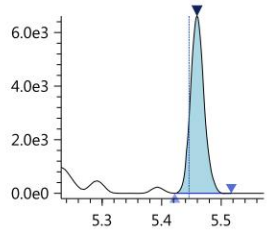
Conc 0.0023
RT 5.459 Area 10672
Q 663.00>618.90 (-) 6.62e3



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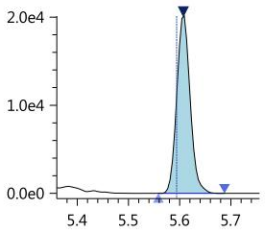
Conc 0.0068
RT 5.607 Area 36774
Q 713.40>669.00 (-) 2.01e4



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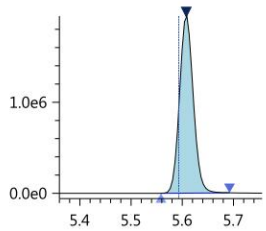
Conc 2.6272
RT 5.608 Area 3639677
Q 714.70>669.90 (-) 1.95e6



PFTeDA-13C_IS
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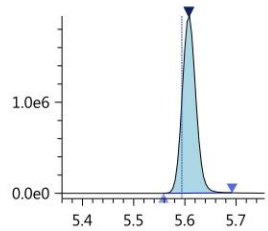
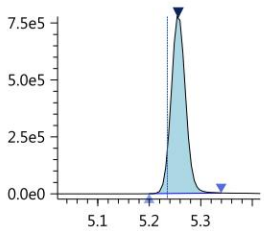
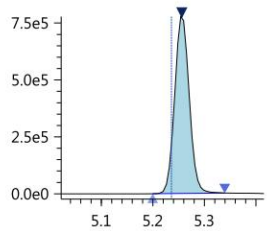
RT 5.608 Area 3639677
ISTD 714.70>669.90 (-) 1.95e6



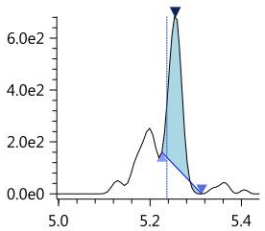
FOSA-13C_IS
Conc 5.0000
RT 5.256 Area 1528826
ISTD 506.00>78.05 (-) 7.78e5



FOSA-13C
Conc 3.1812
RT 5.256 Area 1528826
Q 506.00>78.05 (-) 7.78e5



FOSA
Conc 0.0027
RT 5.256 Area 1078
Q 498.20>78.00 (-) 6.83e2



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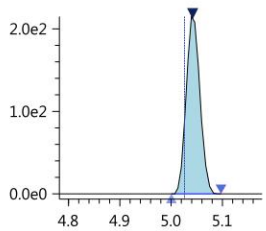
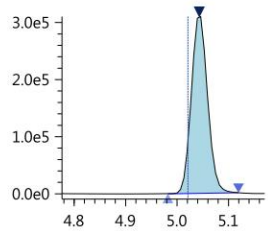
Conc 0.0048
RT 5.042 Area 406
Q 570.20>419.00 (-) 2.15e2



N-MeFOSAA-d3
Conc 1.9487
RT 5.043 Area 683394
Q 572.80>419.05 (-) 3.10e5



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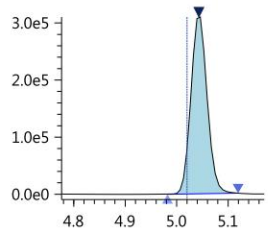
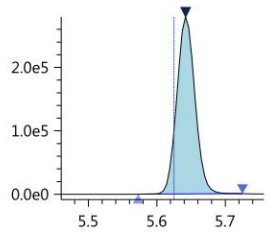
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.043 Area 683394
ISTD 572.80>419.05 (-) 3.10e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.642 Area 517700
ISTD 514.90>168.90 (-) 2.80e5



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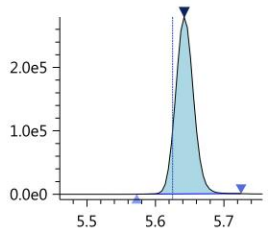
Q 514.90>168.90 (-) 2.80e5



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Conc 0.0069
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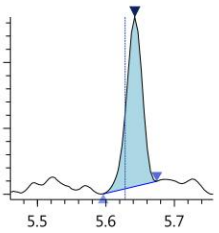
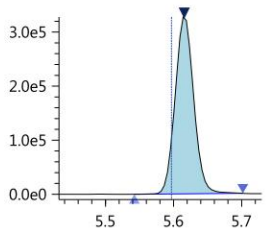
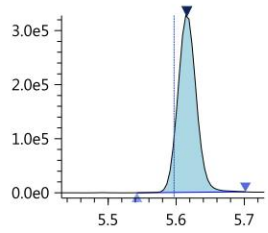
Q 512.00>169.10 (-) 5.38e2



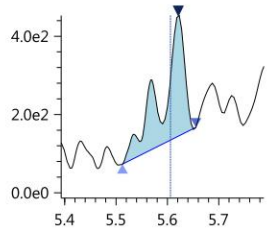
N-MeFOSE-d7
Conc 3.3819
RT 5.616 Area 624582
Q 622.70>59.10 (-) 3.28e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.616 Area 624582
ISTD 622.70>59.10 (-) 3.28e5



N-MeFOSE
Conc 0.0057
RT 5.621 Area 927
Q 616.00>59.00 (-) 4.53e2



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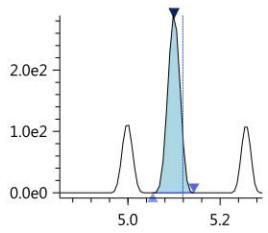
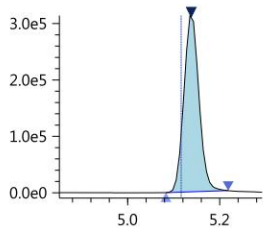
Conc 0.0067
RT 5.100 Area 557
Q 584.20>418.95 (-) 2.89e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.138 Area 715229
ISTD 588.80>419.00 (-) 3.14e5



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Conc 2.0443
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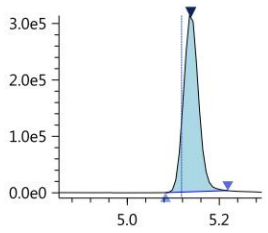
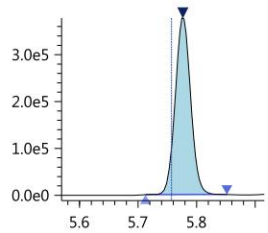
Q 588.80>419.00 (-) 3.14e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.776 Area 696241
ISTD 530.90>169.15 (-) 3.78e5



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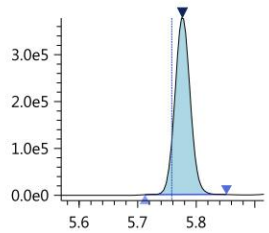
RT 5.776 Area 696241
Q 530.90>169.15 (-) 3.78e5



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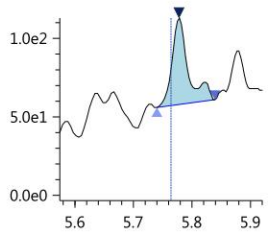
Conc 0.0046
RT 5.778 Area 106
Q 526.90>169.10 (-) 1.13e2



N-EtFOSE-d9_IS
Conc 5.0000
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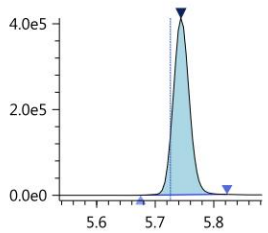

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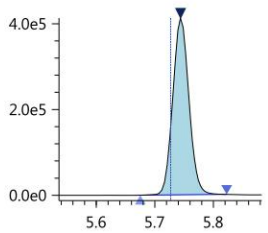
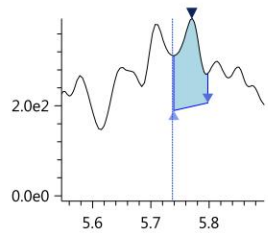
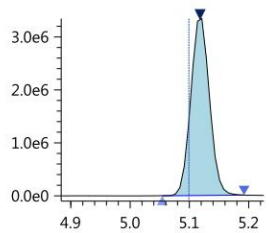
Q 638.70>59.10 (-) 4.13e5



N-EtFOSE
Conc 0.0033
RT 5.770 Area 482
Q 630.00>58.90 (-) 3.94e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.118 Area 7393806
ISTD 570.00>525.00 (-) 3.35e6



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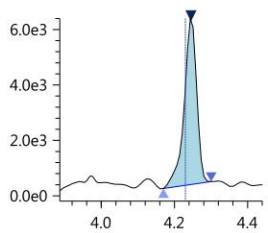
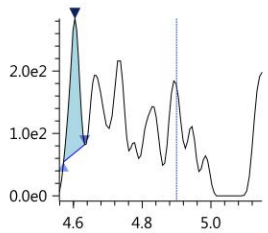
Conc 0.2403
RT 4.245 Area 14263
Q 349.00>99.00 (-) 6.40e3



PFNS
Conc 0.0047
RT 4.604 Area 394
Q 549.00>99.00 (-) 2.84e2



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_025
Lab ID: K1902064-009
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 14:08
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_025	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:08	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-009	**Raw Units:**	ng/mL

Bottle ID:	K1902064-009.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.110	0.00	7427323	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.012		653803	3.3746	67	20 - 109	Y
18O2-PFHxS	4.408	0.00	491431	3.6875	74	26 - 122	Y
13C4-PFOS	4.734	+0.00	638932	4.0410	81	25 - 121	Y
13C4-PFBA	3.220	-0.14	2283219	3.4520	69	27 - 124	Y
13C5-PFPeA	3.962	+0.00	1630743	3.8035	76	27 - 138	Y
13C2-PFHxA	4.230	+0.00	4946585	3.7412	75	28 - 132	Y
13C4-PFHpA	4.409	0.00	5049508	3.7133	74	19 - 139	Y
13C4-PFOA	4.578	+0.00	5029842	3.7109	74	22 - 130	Y
13C5-PFNA	4.750	+0.00	5895900	3.8783	78	20 - 127	Y
13C2-PFDA	4.931	+0.00	5349036	3.7298	75	24 - 125	Y
13C2-PFUnDA	5.111	0.00	4620357	3.5806	72	22 - 125	Y
13C2-PFDoDA	5.288		6299977	3.3518	67	19 - 122	Y
13C2-PFTeDA	5.609	+0.01	5150333	3.7008	74	13 - 124	Y
13C8-FOSA	5.251	+0.01	1656522	3.4314	69	18 - 109	Y
D3-MeFOSAA	5.036	0.00	853952	2.4240	48	9 - 123	Y
D5-EtFOSAA	5.132		963666	2.7420	55	12 - 126	Y
13C2-6:2 FTS	4.569	+0.00	775517	5.0783	102	10 - 226	Y
13C2-8:2 FTS	4.929	+0.00	766066	4.2996	86	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)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.416	+0.01	2091	0.0195	0.55	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

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1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_025	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:08	**Vial:**	11
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-009	**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	+0.00	1219	0.0140	0.39	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.090	0.00	88	0.0008	0.022	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.963	+0.00	88797	-0.0079	0	U	Y
Perfluorohexanoic acid (PFHxA)	4.205	-0.02	30529	-0.0005	0	U	Y
Perfluoroheptanoic acid (PFHpA)	4.397	-0.01	21349	-0.0130	0	U	Y
Perfluorooctanoic acid (PFOA)	4.556	-0.02	24390	0.0041	0.12	U	Y
Perfluorononanoic acid (PFNA)	4.724	-0.03	16173	0.0033	0.093	U	Y
Perfluorodecanoic acid (PFDA)	4.912	-0.02	12374	0.0142	0.40	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.100	-0.01	16762	-0.0167	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.277	-0.01	13371	0.0075	0.21	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.451	0.00	11515	-0.0016	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.609	+0.01	49934	0.0009	0.025	U	Y
Perfluorooctane sulfonamide (FOSA)	5.248	+0.00	1604	0.0037	0.10	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.027	-0.01	1574	0.0149	0.42	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.566	0.00	287	0.0017	0.048	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0		0	0	0	U	Y

Prep Amount:	285.0000 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 3/21/2019 9:48:23 AM

190319_025

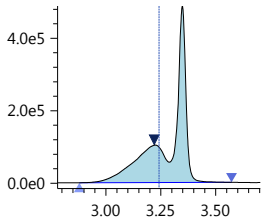
Sample ID: K1902064-009
Date acquired: 3/19/2019 2:08:41 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_025.lcd
Vial: 11 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.220	2283219	2283219	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.220	2283219	7427323	26	3.4520	ng/mL	----
PFBA	ND(W/B)	----	----	2283219	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.962	1630743	1630743	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.962	1630743	7427323	26	3.8035	ng/mL	----
PFPeA	Auto	3.963	88797	1630743	4	-0.0079	ng/mL	----
PFBS_1	ND(W/B)	----	----	653803	16	----	ng/mL	----
PFBS-13C	Auto	4.012	653803	7427323	26	3.3746	ng/mL	----
PFBS-13C_IS	Auto	4.012	653803	653803	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.230	4946585	4946585	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.230	4946585	7427323	26	3.7412	ng/mL	----
PFHxA	Auto	4.205	30529	4946585	6	-0.0005	ng/mL	----
PFHpA	Auto	4.397	21349	5049508	8	-0.0130	ng/mL	----
PFHpA-13C_IS	Auto	4.409	5049508	5049508	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.409	5049508	7427323	26	3.7133	ng/mL	----
PFHxS-18O_IS	Auto	4.408	491431	491431	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.408	491431	7427323	26	3.6875	ng/mL	----
PFHxS_1	Auto	4.416	2091	491431	7	0.0195	ng/mL	----
6_2-FTS-13C	Auto	4.569	775517	7427323	26	5.0783	ng/mL	----
6_2-FTS-13C_IS	Auto	4.569	775517	775517	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.566	287	775517	10	0.0017	ng/mL	----
PFHpS_1	ND(W/B)	----	----	491431	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.578	5029842	5029842	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.578	5029842	7427323	26	3.7109	ng/mL	----
PFOA	Auto	4.556	24390	5029842	9	0.0041	ng/mL	----
PFOS_1	M	4.737	1219	638932	13	0.0140	ng/mL	----
PFOS-13C_IS	Auto	4.734	638932	638932	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.734	638932	7427323	26	4.0410	ng/mL	----
PFNA-13C_IS	Auto	4.750	5895900	5895900	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.750	5895900	7427323	26	3.8783	ng/mL	----
PFNA	Auto	4.724	16173	5895900	11	0.0033	ng/mL	----
PFDA-13C_IS	Auto	4.931	5349036	5349036	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.931	5349036	7427323	26	3.7298	ng/mL	----
PFDA	M	4.912	12374	5349036	12	0.0142	ng/mL	----
8_2-FTS-13C_IS	Auto	4.929	766066	766066	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.929	766066	7427323	26	4.2996	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	766066	15	----	ng/mL	----
PFUnA	Auto	5.100	16762	4620357	14	-0.0167	ng/mL	----
PFUnA-13C_IS	Auto	5.111	4620357	4620357	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.111	4620357	7427323	26	3.5806	ng/mL	----
PFDoA	Auto	5.277	13371	6299977	17	0.0075	ng/mL	----
PFDoA-13C	Auto	5.288	6299977	7427323	26	3.3518	ng/mL	----
PFDoA-13C_IS	Auto	5.288	6299977	6299977	17	5.0000	ng/mL	----
PFTrDA	Auto	5.451	11515	5150333	22	-0.0016	ng/mL	----
PFTeDA	Auto	5.609	49934	5150333	22	0.0009	ng/mL	----
PFTeDA-13C	Auto	5.609	5150333	7427323	26	3.7008	ng/mL	----
PFTeDA-13C_IS	Auto	5.609	5150333	5150333	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.251	1656522	1656522	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.251	1656522	7427323	26	3.4314	ng/mL	----
FOSA	M	5.248	1604	1656522	18	0.0037	ng/mL	----
N-MeFOSAA	Auto	5.027	1574	853952	19	0.0149	ng/mL	----
N-MeFOSAA-d3	Auto	5.036	853952	7427323	26	2.4240	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.036	853952	853952	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	963666	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.132	963666	963666	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.132	963666	7427323	26	2.7420	ng/mL	----
13C7-PFUnDA_IS	Auto	5.110	7427323	7427323	26	5.0000	ng/mL	----

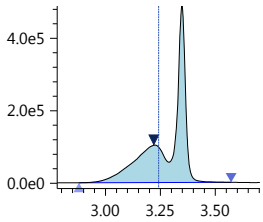
Insight Report

Printed at 3/21/2019 9:48:23 AM

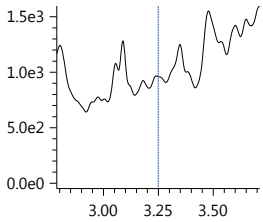
PFBA-13C_IS
Conc 5.0000
RT 3.220 Area 2283219
ISTD 216.90>172.15 (-) 4.89e5



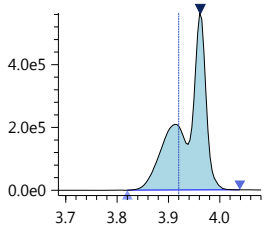
PFBA-13C
Conc 3.4520
RT 3.220 Area 2283219
Q 216.90>172.15 (-) 4.89e5



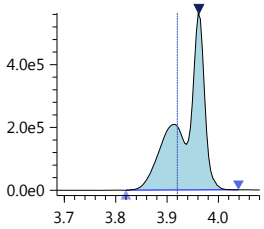
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.60e3



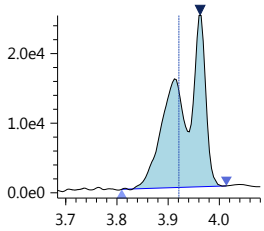
PFPeA-13C_IS
Conc 5.0000
RT 3.962 Area 1630743
ISTD 267.90>223.00 (-) 5.64e5



PFPeA-13C
Conc 3.8035
RT 3.962 Area 1630743
Q 267.90>223.00 (-) 5.64e5

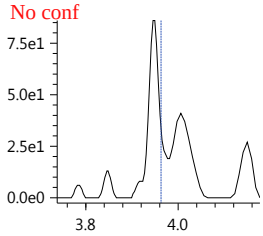


PFPeA
Conc -0.0079
RT 3.963 Area 88797
Q 263.05>219.10 (-) 2.55e4

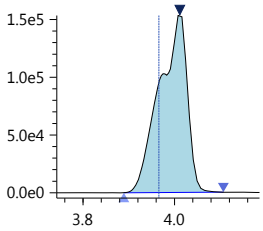


PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 8.60e1

No conf



PFBS-13C
Conc 3.3746
RT 4.012 Area 653803
Q 301.80>80.00 (-) 1.53e5



PFBS-13C_IS
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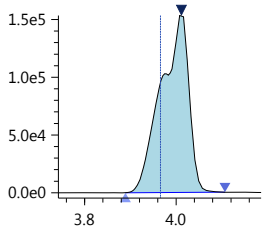
ISTD 301.80>80.00 (-) 1.53e5



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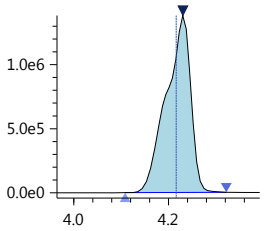
Conc 5.0000
RT 4.230 Area 4946585
ISTD 314.90>270.10 (-) 1.38e6



PFHxA-13C
Conc 3.7412
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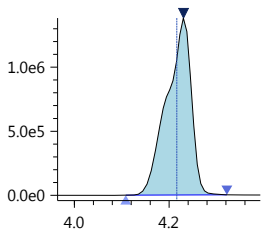
Q 314.90>270.10 (-) 1.38e6



PFHxA
Conc -0.0005
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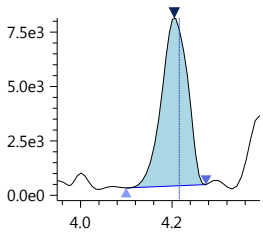
Q 313.00>269.00 (-) 8.15e3



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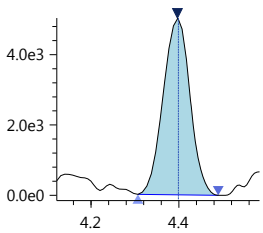
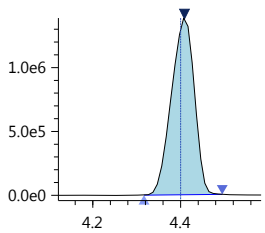
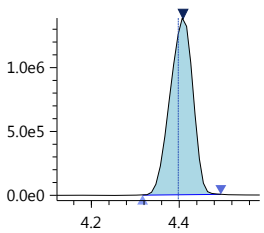
Conc -0.0130
RT 4.397 Area 21349
Q 362.90>319.00 (-) 5.04e3



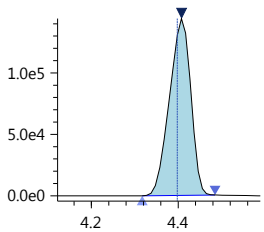
PFHpA-13C_IS
Conc 5.0000
RT 4.409 Area 5049508
ISTD 366.90>322.10 (-) 1.39e6



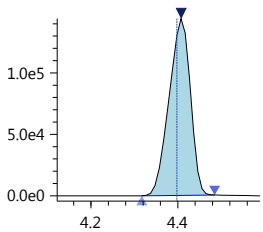
PFHpA-13C
Conc 3.7133
RT 4.409 Area 5049508
Q 366.90>322.10 (-) 1.39e6



PFHxS-18O_IS
Conc 5.0000
RT 4.408 Area 491431
ISTD 402.70>84.05 (-) 1.44e5



PFHxS-18O
Conc 3.6875
RT 4.408 Area 491431
Q 402.70>84.05 (-) 1.44e5



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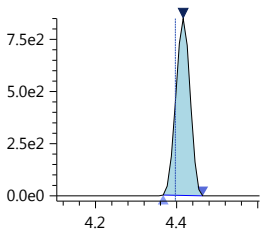
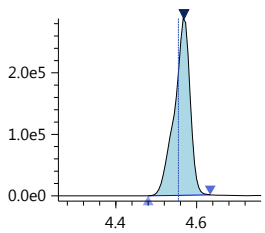
Conc 0.0195
RT 4.416 Area 2091
Q 399.00>80.00 (-) 8.50e2



6_2-FTS-13C
Conc 5.0783
RT 4.569 Area 775517
Q 428.90>409.00 (-) 2.88e5



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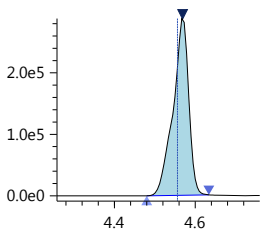
ISTD 428.90>409.00 (-) 2.88e5



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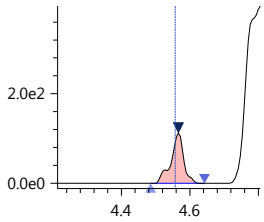
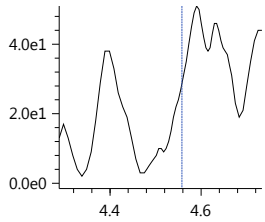
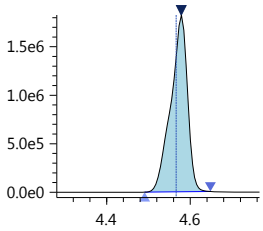
6_2-FTS_1
Conc 0.0017
RT 4.566 Area 287
Q 427.00>407.00 (-) 3.96e2
After-blc



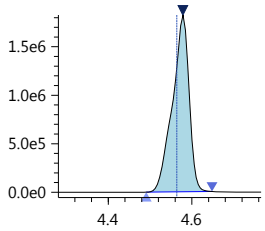
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 5.10e1



PFOA-13C_IS
Conc 5.0000
RT 4.578 Area 5029842
ISTD 416.80>372.05 (-) 1.83e6



PFOA-13C
Conc 3.7109
RT 4.578 Area 5029842
Q 416.80>372.05 (-) 1.83e6



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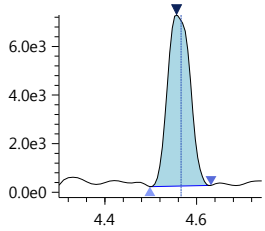
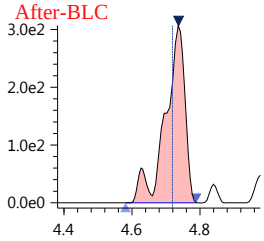
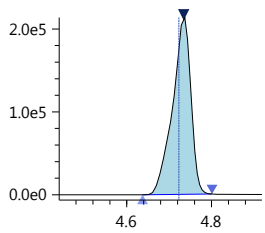
Q 413.00>369.00 (-) 7.29e3



PFOS_1
Conc 0.0140
RT 4.737 Area 1219
Q 499.00>80.00 (-) 3.07e2
After-BLC



PFOS-13C_IS
Conc 5.0000
RT 4.734 Area 638932
ISTD 502.80>80.05 (-) 2.14e5



PFOS-13C
Conc 4.0410
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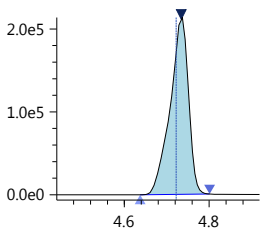
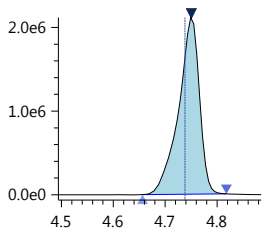
Q 502.80>80.05 (-) 2.14e5



PFNA-13C_IS
Conc 5.0000
RT 4.750 Area 5895900
ISTD 467.80>423.00 (-) 2.12e6



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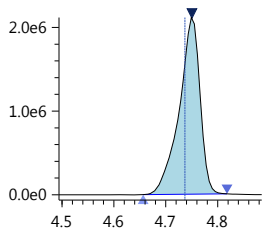
Q 467.80>423.00 (-) 2.12e6



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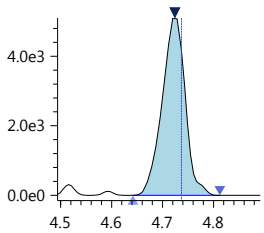
Q 463.00>418.90 (-) 5.10e3



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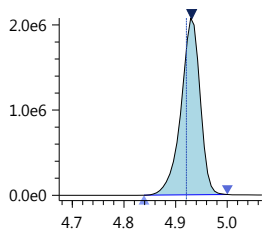

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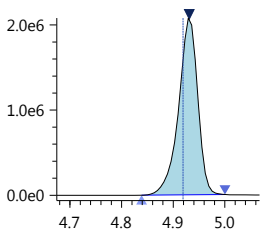

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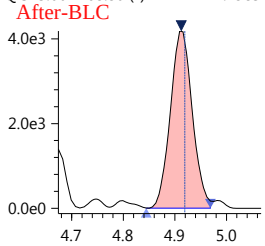
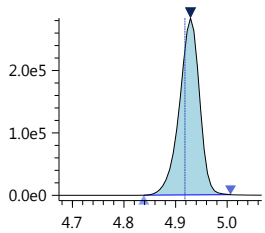
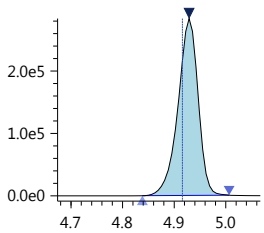
Q 513.00>468.80 (-) 4.19e3
After-BLC



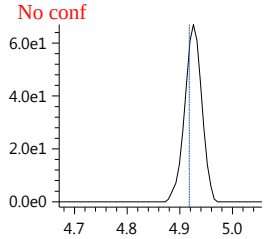
8_2-FTS-13C_IS
Conc 5.0000
RT 4.929 Area 766066
ISTD 528.80>509.00 (-) 2.84e5



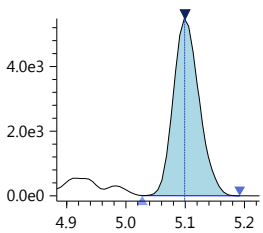
8_2-FTS-13C
Conc 4.2996
RT 4.929 Area 766066
Q 528.80>509.00 (-) 2.84e5



8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 6.70e1
No conf



PFUnA
Conc -0.0167
RT 5.100 Area 16762
Q 563.00>518.90 (-) 5.48e3



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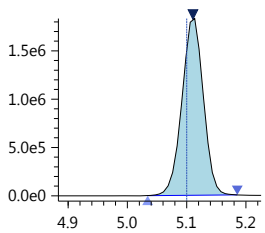

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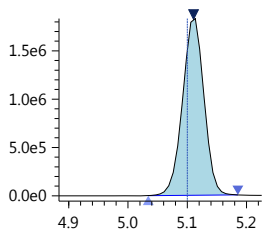
Q 564.80>519.95 (-) 1.83e6



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RT 5.277 Area 13371
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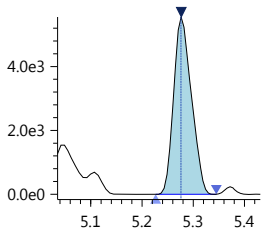

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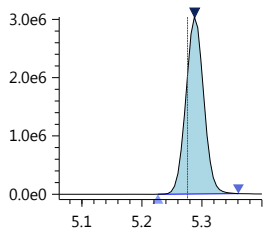
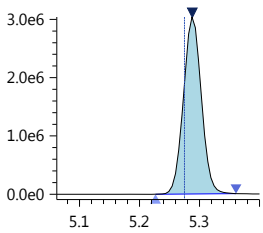
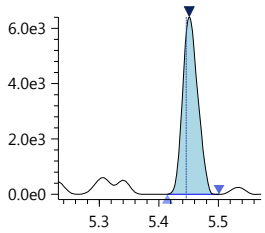
Conc 3.3518
RT 5.288 Area 6299977
Q 614.80>569.95 (-) 3.04e6



PFDoA-13C_IS
Conc 5.0000
RT 5.288 Area 6299977
ISTD 614.80>569.95 (-) 3.04e6



PFTrDA
Conc -0.0016
RT 5.451 Area 11515
Q 663.00>618.90 (-) 6.41e3



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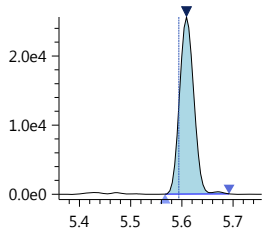
Conc 0.0009
RT 5.609 Area 49934
Q 713.40>669.00 (-) 2.56e4



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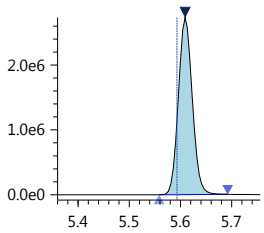
Conc 3.7008
RT 5.609 Area 5150333
Q 714.70>669.90 (-) 2.73e6



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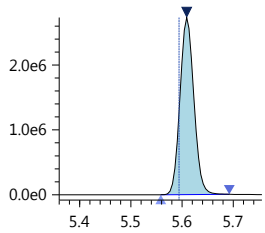

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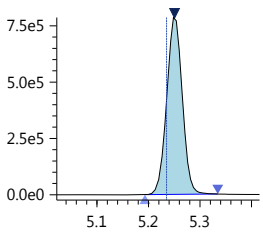
Conc 5.0000
RT 5.251 Area 1656522
ISTD 506.00>78.05 (-) 7.87e5



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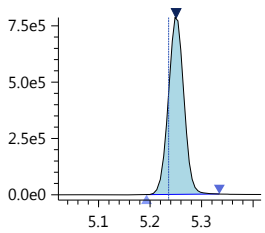
RT 5.251 Area 1656522
Q 506.00>78.05 (-) 7.87e5



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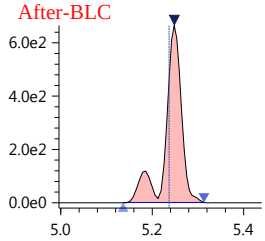
RT 5.248 Area 1604
Q 498.20>78.00 (-) 6.65e2



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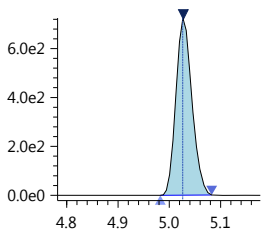
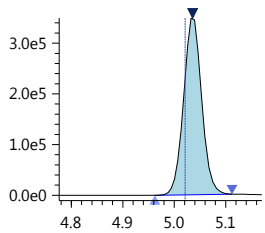
RT 5.027 Area 1574
Q 570.20>419.00 (-) 7.25e2



N-MeFOSAA-d3
Conc 2.4240
RT 5.036 Area 853952
Q 572.80>419.05 (-) 3.50e5



N-MeFOSAA-d3_IS
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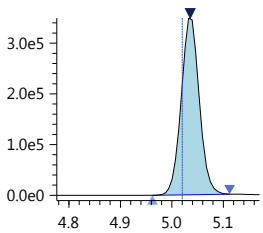
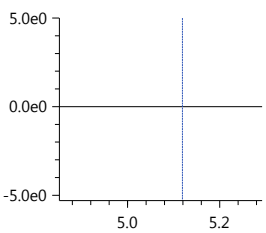
ISTD 572.80>419.05 (-) 3.50e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
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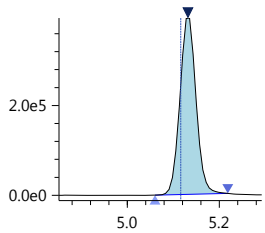
RT 5.132 Area 963666
ISTD 588.80>419.00 (-) 3.95e5



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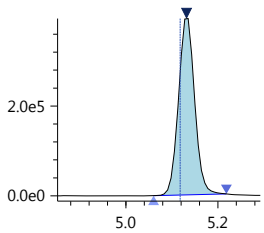
Q 588.80>419.00 (-) 3.95e5



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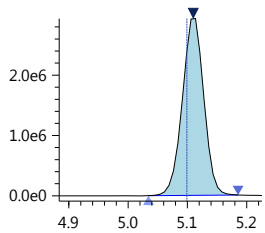
ISTD 570.00>525.00 (-) 2.94e6



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Printed at 3/21/2019 9:16:10 AM

190319_025

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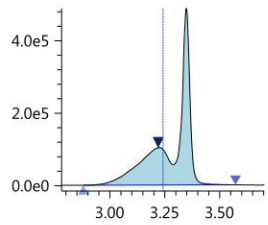
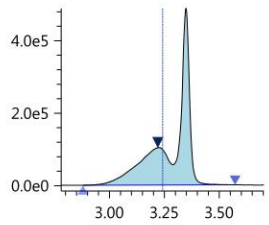
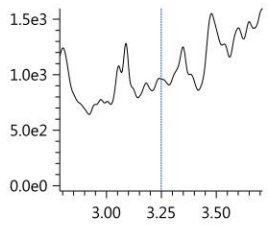
PFBA-13C_IS
Conc 5.0000
RT 3.220 Area 2283219
ISTD 216.90>172.15 (-) 4.89e5



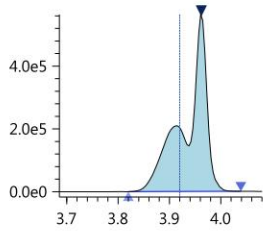
PFBA-13C
Conc 3.4520
RT 3.220 Area 2283219
Q 216.90>172.15 (-) 4.89e5



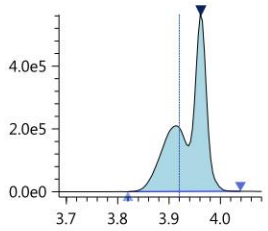
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.60e3



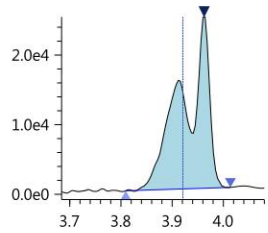
PFPeA-13C_IS
Conc 5.0000
RT 3.962 Area 1630743
ISTD 267.90>223.00 (-) 5.64e5



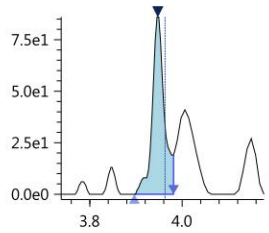
PFPeA-13C
Conc 3.8035
RT 3.962 Area 1630743
Q 267.90>223.00 (-) 5.64e5



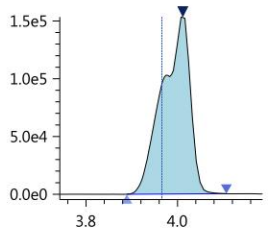
PFPeA
Conc -0.0079
RT 3.963 Area 88797
Q 263.05>219.10 (-) 2.55e4



PFBS_1
Conc 0.0011
RT 3.947 Area 156
Q 299.00>80.00 (-) 8.60e1



PFBS-13C
Conc 3.3746
RT 4.012 Area 653803
Q 301.80>80.00 (-) 1.53e5



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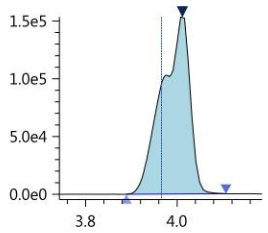
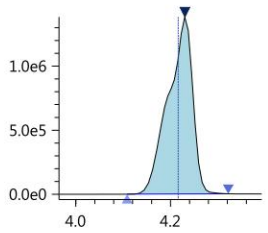
RT 4.012 Area 653803
ISTD 301.80>80.00 (-) 1.53e5



PFHxA-13C_IS
Conc 5.0000
RT 4.230 Area 4946585
ISTD 314.90>270.10 (-) 1.38e6



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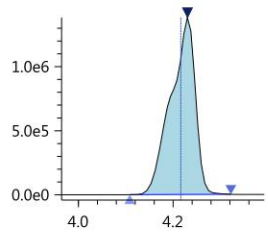
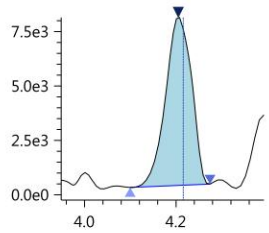
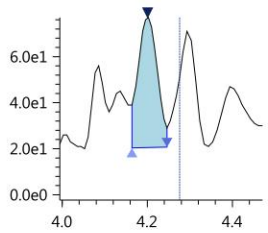
Conc 3.7412
RT 4.230 Area 4946585
Q 314.90>270.10 (-) 1.38e6



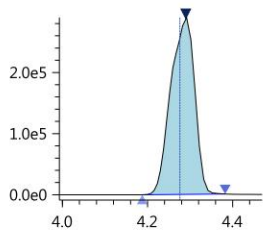
PFHxA
Conc -0.0005
RT 4.205 Area 30529
Q 313.00>269.00 (-) 8.15e3



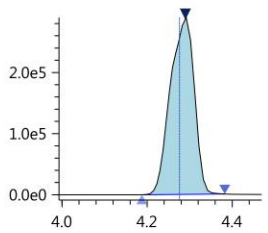
HPFO_DA
Conc 0.0007
RT 4.201 Area 178
Q 329.00>169.00 (-) 7.70e1



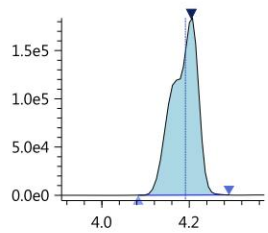
HFPO_DA-13C_IS
Conc 5.0000
RT 4.290 Area 1133833
ISTD 332.00>286.80 (-) 2.90e5



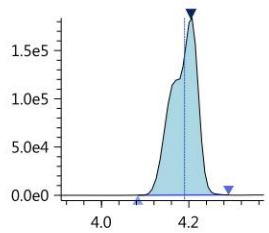
HFPO_DA-13C
Conc 3.9493
RT 4.290 Area 1133833
Q 332.00>286.80 (-) 2.90e5



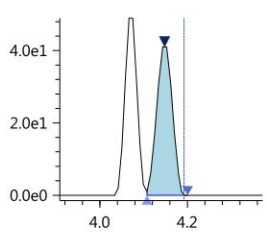
4_2-FTS-13C_IS
Conc 5.0000
RT 4.205 Area 733765
ISTD 328.80>309.05 (-) 1.84e5



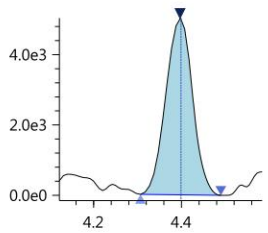
4_2-FTS-13C
Conc 4.2507
RT 4.205 Area 733765
Q 328.80>309.05 (-) 1.84e5



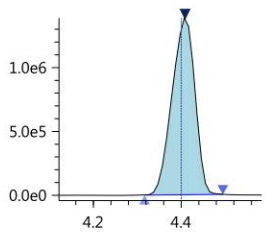
4_2-FTS_1
Conc 0.0006
RT 4.148 Area 104
Q 327.00>307.05 (-) 4.90e1



PFHpA
Conc -0.0130
RT 4.397 Area 21349
Q 362.90>319.00 (-) 5.04e3



PFHpA-13C_IS
Conc 5.0000
RT 4.409 Area 5049508
ISTD 366.90>322.10 (-) 1.39e6



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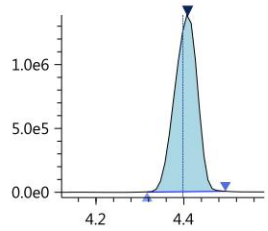
PFHpA-13C
Conc 3.7133
RT 4.409 Area 5049508
Q 366.90>322.10 (-) 1.39e6



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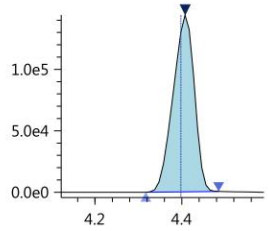
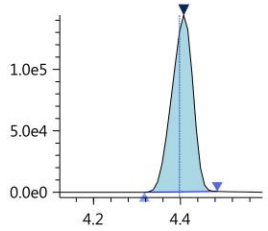
Conc 5.0000
RT 4.408 Area 491431
ISTD 402.70>84.05 (-) 1.44e5



PFHxS-18O
Conc 3.6875
RT 4.408 Area 491431
Q 402.70>84.05 (-) 1.44e5



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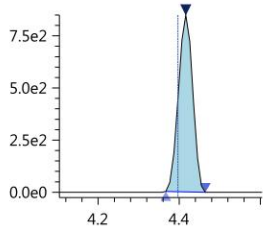
Conc 0.0195
RT 4.416 Area 2091
Q 399.00>80.00 (-) 8.50e2



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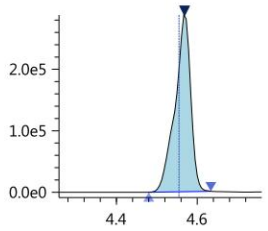
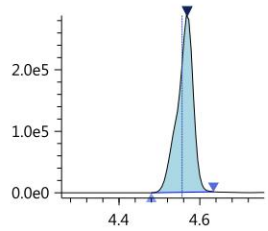
Conc 5.0783
RT 4.569 Area 775517
Q 428.90>409.00 (-) 2.88e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.569 Area 775517
ISTD 428.90>409.00 (-) 2.88e5



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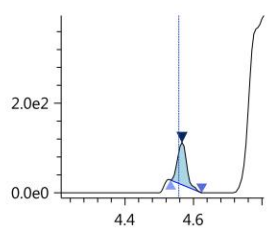
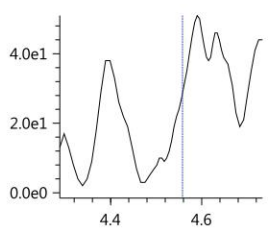
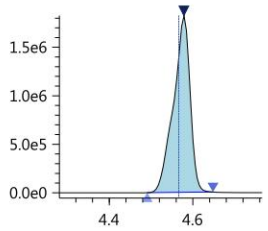
Conc 0.0011
RT 4.566 Area 176
Q 427.00>407.00 (-) 3.96e2



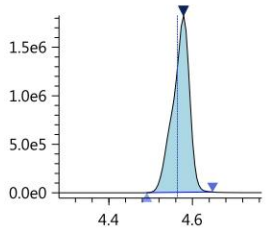
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 5.10e1



PFOA-13C_IS
Conc 5.0000
RT 4.578 Area 5029842
ISTD 416.80>372.05 (-) 1.83e6



PFOA-13C
Conc 3.7109
RT 4.578 Area 5029842
Q 416.80>372.05 (-) 1.83e6



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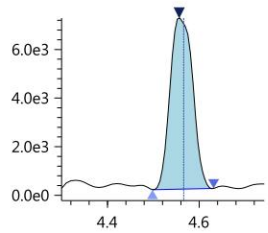
Conc 0.0041
RT 4.556 Area 24390
Q 413.00>369.00 (-) 7.29e3



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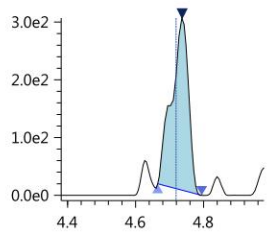
Conc 0.0118
RT 4.737 Area 1027
Q 499.00>80.00 (-) 3.07e2



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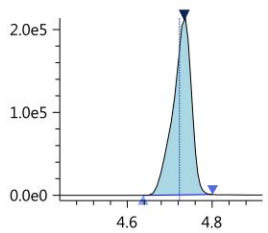
Conc 5.0000
RT 4.734 Area 638932
ISTD 502.80>80.05 (-) 2.14e5



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Conc 4.0410
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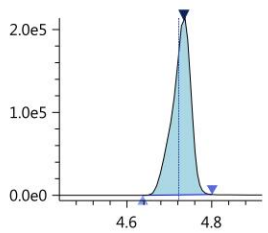
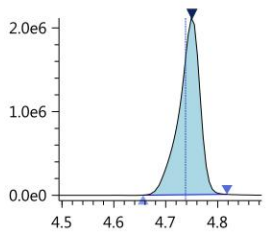
Q 502.80>80.05 (-) 2.14e5



PFNA-13C_IS
Conc 5.0000
RT 4.750 Area 5895900
ISTD 467.80>423.00 (-) 2.12e6



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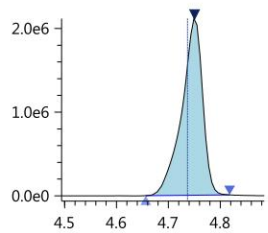
Conc 3.8783
RT 4.750 Area 5895900
Q 467.80>423.00 (-) 2.12e6



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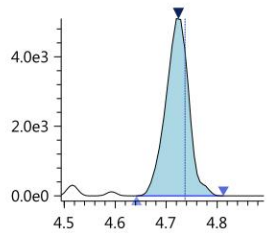
RT 4.724 Area 16173
Q 463.00>418.90 (-) 5.10e3



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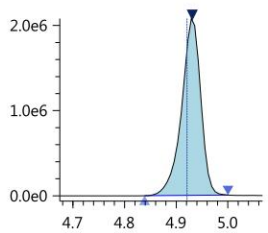
ISTD 514.80>469.95 (-) 2.08e6



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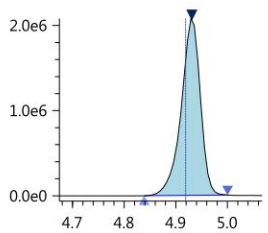
RT 4.931 Area 5349036
Q 514.80>469.95 (-) 2.08e6



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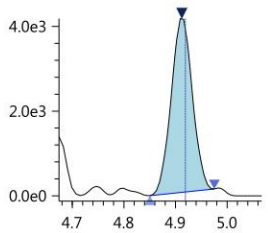
Conc 0.0136
RT 4.912 Area 11849
Q 513.00>468.80 (-) 4.19e3



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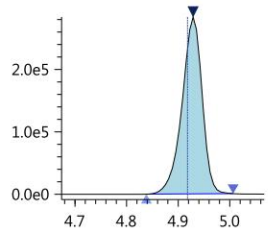
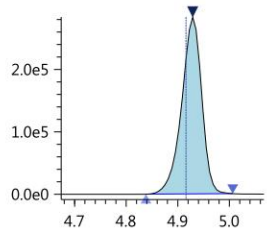
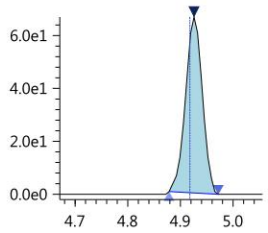
8_2-FTS-13C_IS
Conc 5.0000
RT 4.929 Area 766066
ISTD 528.80>509.00 (-) 2.84e5



8_2-FTS-13C
Conc 4.2996
RT 4.929 Area 766066
Q 528.80>509.00 (-) 2.84e5



8_2-FTS_1
Conc 0.0010
RT 4.926 Area 148
Q 527.10>506.90 (-) 6.70e1



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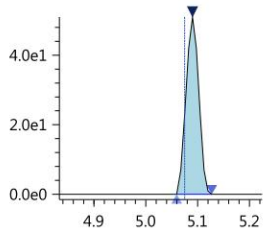
RT 5.090 Area 88
Q 599.00>79.90 (-) 5.10e1



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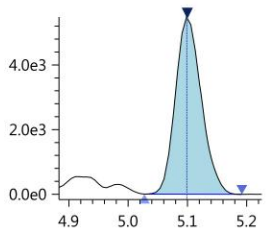
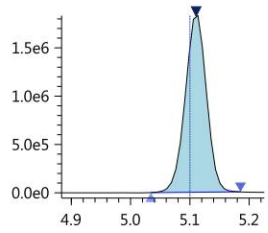
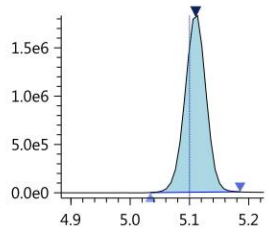
Conc -0.0167
RT 5.100 Area 16762
Q 563.00>518.90 (-) 5.48e3



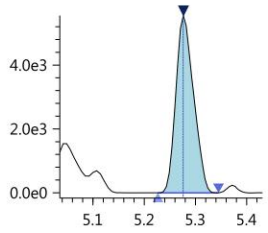
PFUnA-13C_IS
Conc 5.0000
RT 5.111 Area 4620357
ISTD 564.80>519.95 (-) 1.83e6



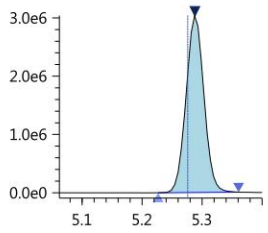
PFUnA-13C
Conc 3.5806
RT 5.111 Area 4620357
Q 564.80>519.95 (-) 1.83e6



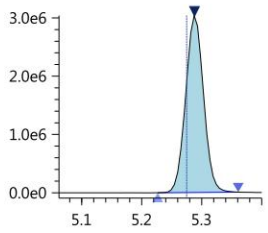
PFDoA
Conc 0.0075
RT 5.277 Area 13371
Q 613.05>569.00 (-) 5.55e3



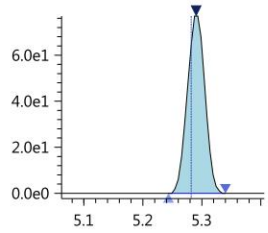
PFDoA-13C
Conc 3.3518
RT 5.288 Area 6299977
Q 614.80>569.95 (-) 3.04e6



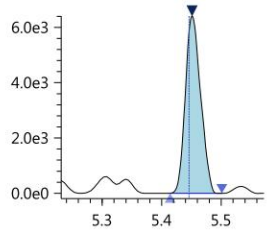
PFDoA-13C_IS
Conc 5.0000
RT 5.288 Area 6299977
ISTD 614.80>569.95 (-) 3.04e6



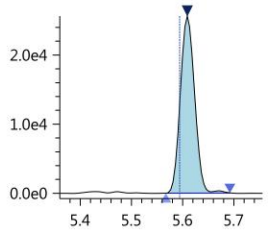
10_2-FtS_1
Conc 0.0009
RT 5.290 Area 163
Q 627.00>606.95 (-) 7.70e1



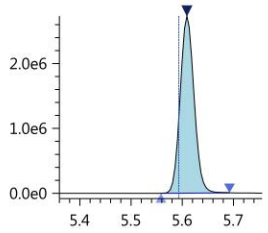
PFTrDA
Conc -0.0016
RT 5.451 Area 11515
Q 663.00>618.90 (-) 6.41e3



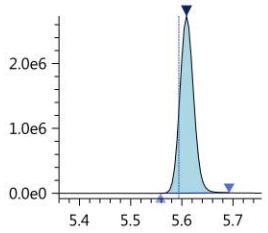
PFTeDA
Conc 0.0009
RT 5.609 Area 49934
Q 713.40>669.00 (-) 2.56e4



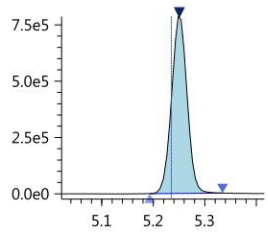
PFTeDA-13C
Conc 3.7008
RT 5.609 Area 5150333
Q 714.70>669.90 (-) 2.73e6



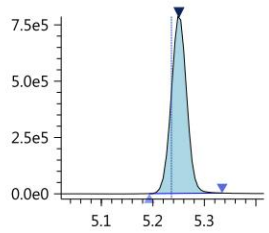
PFTeDA-13C_IS
Conc 5.0000
RT 5.609 Area 5150333
ISTD 714.70>669.90 (-) 2.73e6



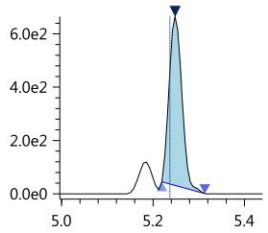
FOSA-13C_IS
Conc 5.0000
RT 5.251 Area 1656522
ISTD 506.00>78.05 (-) 7.87e5



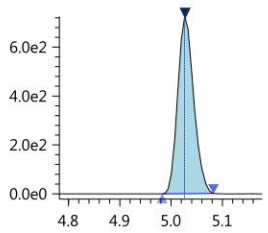
FOSA-13C
Conc 3.4314
RT 5.251 Area 1656522
Q 506.00>78.05 (-) 7.87e5



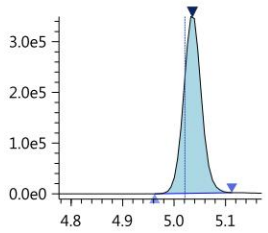
FOSA
Conc 0.0028
RT 5.248 Area 1230
Q 498.20>78.00 (-) 6.65e2



N-MeFOSAA
Conc 0.0149
RT 5.027 Area 1574
Q 570.20>419.00 (-) 7.25e2



N-MeFOSAA-d3
Conc 2.4240
RT 5.036 Area 853952
Q 572.80>419.05 (-) 3.50e5



Insight Report

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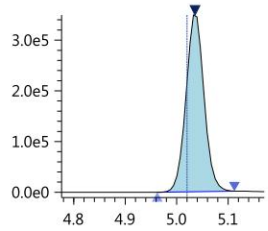
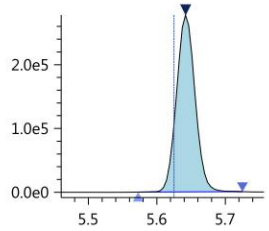
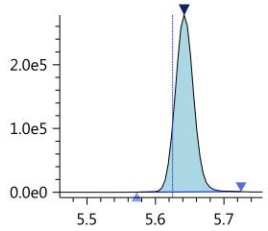
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.036 Area 853952
ISTD 572.80>419.05 (-) 3.50e5



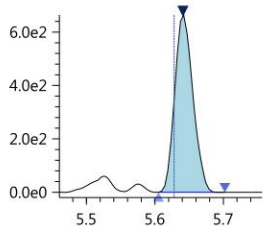
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.642 Area 524536
ISTD 514.90>168.90 (-) 2.78e5



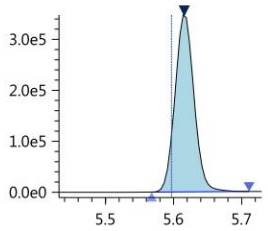
N-MeFOSA-d3
Conc 2.9899
RT 5.642 Area 524536
Q 514.90>168.90 (-) 2.78e5



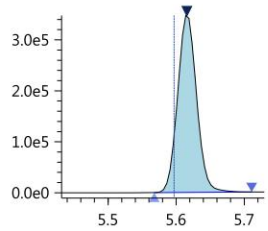
N-MeFOSA
Conc 0.0099
RT 5.641 Area 1234
Q 512.00>169.10 (-) 6.64e2



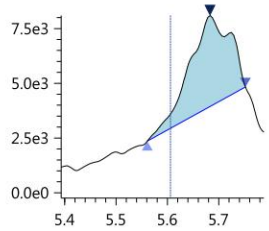
N-MeFOSE-d7
Conc 3.6375
RT 5.616 Area 674828
Q 622.70>59.10 (-) 3.48e5



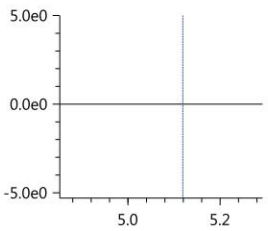
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.616 Area 674828
ISTD 622.70>59.10 (-) 3.48e5



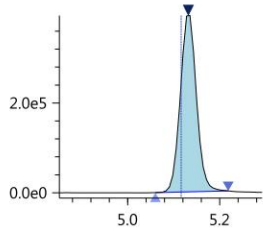
N-MeFOSE
Conc 0.1298
RT 5.683 Area 22625
Q 616.00>59.00 (-) 8.10e3



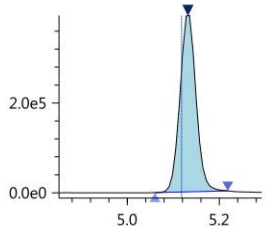
N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



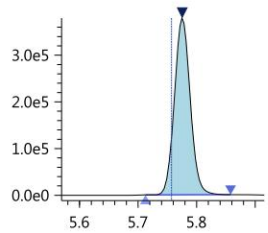
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.132 Area 963666
ISTD 588.80>419.00 (-) 3.95e5



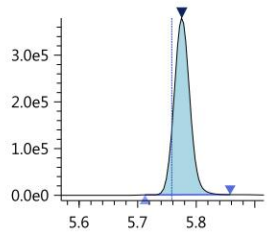
N-EtFOSAA-d5
Conc 2.7420
RT 5.132 Area 963666
Q 588.80>419.00 (-) 3.95e5



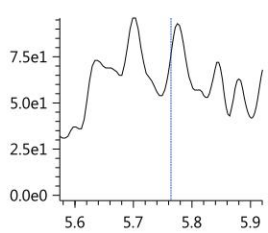
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 713002
ISTD 530.90>169.15 (-) 3.80e5



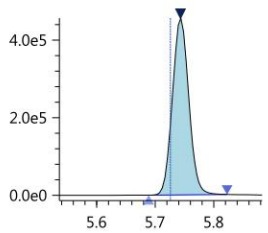
N-EtFOSA-d9
Conc 2.9352
RT 5.775 Area 713002
Q 530.90>169.15 (-) 3.80e5



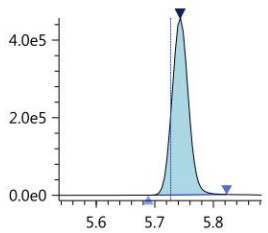
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 9.60e1



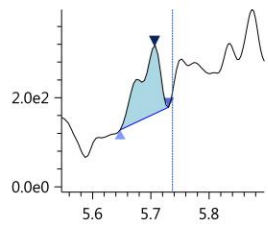
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.743 Area 887222
ISTD 638.70>59.10 (-) 4.57e5



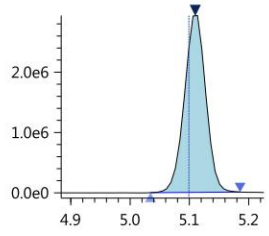
N-EtFOSE-d9
Conc 3.4648
RT 5.743 Area 887222
Q 638.70>59.10 (-) 4.57e5



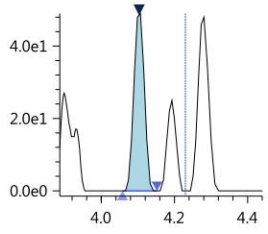
N-EtFOSE
Conc 0.0023
RT 5.706 Area 387
Q 630.00>58.90 (-) 3.98e2



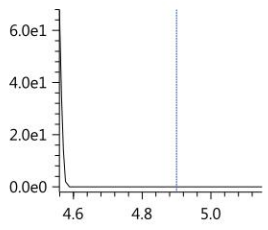
13C7-PFUnDA_IS
Conc 5.0000
RT 5.110 Area 7427323
ISTD 570.00>525.00 (-) 2.94e6



PFPeS
Conc 0.0012
RT 4.103 Area 99
Q 349.00>99.00 (-) 4.90e1



PFNS
Conc ----
RT ---- Area ----
Q 549.00>99.00 (-) 6.80e1



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_026
Lab ID: K1902064-010
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 14:19
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok
Above Highest ICAL Level	Perfluorohexane sulfonic acid (PFHxS)	3065306		1420175	See dilution

Primary Review: _____

Printed: 3/21/19 10:05
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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_026	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:19	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-010	**Raw Units:**	ng/mL

Bottle ID:	K1902064-010.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.113	0.00	7003724	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.006	-0.01	454013	2.4851	50	20 - 109	Y
18O2-PFHxS	4.412	+0.00	369741	2.9422	59	26 - 122	Y
13C4-PFOS	4.733	+0.00	582549	3.9072	78	25 - 121	Y
13C4-PFBA	3.340	-0.02	2222503	3.5634	71	27 - 124	Y
13C5-PFPeA	3.957	0.00	1449864	3.5861	72	27 - 138	Y
13C2-PFHxA	4.227	0.00	3998458	3.2070	64	28 - 132	Y
13C4-PFHpA	4.414	+0.00	3800552	2.9639	59	19 - 139	Y
13C4-PFOA	4.578	+0.00	4360678	3.4117	68	22 - 130	Y
13C5-PFNA	4.750	+0.00	4940127	3.4461	69	20 - 127	Y
13C2-PFDA	4.932	+0.00	4023807	2.9755	60	24 - 125	Y
13C2-PFUnDA	5.113	0.00	3523750	2.8959	58	22 - 125	Y
13C2-PFDoDA	5.295	+0.01	5040925	2.8442	57	19 - 122	Y
13C2-PFTeDA	5.612	+0.01	3842536	2.9281	59	13 - 124	Y
13C8-FOSA	5.257	+0.01	1525554	3.3512	67	18 - 109	Y
D3-MeFOSAA	5.037	0.00	667769	2.0102	40	9 - 123	Y
D5-EtFOSAA	5.135	+0.00	722903	2.1813	44	12 - 126	Y
13C2-6:2 FTS	4.567		640917	4.4507	89	10 - 226	Y
13C2-8:2 FTS	4.930	+0.00	636608	3.7891	76	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)	4.004	-0.01	740989	7.6051	200		Y
Perfluorohexane sulfonic acid (PFHxS)	4.408	0.00	3065306	38.0939	1000	E	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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\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_026	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:19	**Vial:**	12
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-010	**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	+0.00	58854	0.6473	17		Y
Perfluorooctane sulfonic acid (PFOS)	4.733	+0.00	257449	3.2439	87		Y
Perfluorodecane sulfonic acid (PFDS)	5.097	+0.01	88	0.0009	0.024	U	Y
Perfluorobutanoic acid (PFBA)	3.342	-0.02	1911162	4.5364	120		Y
Perfluoropentanoic acid (PFPeA)	3.957	0.00	9063290	13.5144	360		Y
Perfluorohexanoic acid (PFHxA)	4.226	0.00	10257018	14.3467	380		Y
Perfluoroheptanoic acid (PFHpA)	4.414	+0.00	6597045	11.0048	290		Y
Perfluorooctanoic acid (PFOA)	4.577	+0.00	3290830	4.5542	120		Y
Perfluorononanoic acid (PFNA)	4.750		716319	1.0474	28		Y
Perfluorodecanoic acid (PFDA)	4.931	+0.00	43205	0.0658	1.8	J	Y
Perfluoroundecanoic acid (PFUnDA)	5.113	0.00	60115	0.0703	1.9	J	Y
Perfluorododecanoic acid (PFDoDA)	5.296	+0.01	16599	0.0173	0.46	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.457	+0.00	12010	0.0034	0.091	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.612	+0.01	39204	0.0082	0.22	U	Y
Perfluorooctane sulfonamide (FOSA)	5.257	+0.01	6928	0.0173	0.46	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.036	-0.01	598	0.0073	0.19	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.567		628109	4.6345	120		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.929	+0.00	39848	0.3273	8.7		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

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Insight Report

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190319_026

Sample ID: K1902064-010
Date acquired: 3/19/2019 2:19:11 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_026.lcd
Vial: 12 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	M	3.340	2224330	2224330	2	5.0000	ng/mL	----
PFBA-13C	M	3.340	2222503	7003724	26	3.5634	ng/mL	----
PFBA	Auto	3.342	1911162	2224330	2	4.5364	ng/mL	----
PFPeA-13C_IS	Auto	3.957	1449864	1449864	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.957	1449864	7003724	26	3.5861	ng/mL	----
PFPeA	Auto	3.957	9063290	1449864	4	13.5144	ng/mL	----
PFBS_1	Auto	4.004	740989	454013	16	7.6051	ng/mL	----
PFBS-13C	Auto	4.006	454013	7003724	26	2.4851	ng/mL	----
PFBS-13C_IS	Auto	4.006	454013	454013	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.227	3998458	3998458	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.227	3998458	7003724	26	3.2070	ng/mL	----
PFHxA	Auto	4.226	10257018	3998458	6	14.3467	ng/mL	----
PFHpA	Auto	4.414	6597045	3800552	8	11.0048	ng/mL	----
PFHpA-13C_IS	Auto	4.414	3800552	3800552	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.414	3800552	7003724	26	2.9639	ng/mL	----
PFHxS-18O_IS	Auto	4.412	369741	369741	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.412	369741	7003724	26	2.9422	ng/mL	----
PFHxS_1	Auto	4.408	3065306	369741	7	38.0939	ng/mL	----
6_2-FTS-13C	Auto	4.567	640917	7003724	26	4.4507	ng/mL	----
6_2-FTS-13C_IS	Auto	4.567	640917	640917	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.567	628109	640917	10	4.6345	ng/mL	----
PFHpS_1	M	4.568	58854	369741	7	0.6473	ng/mL	----
PFOA-13C_IS	Auto	4.578	4360678	4360678	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.578	4360678	7003724	26	3.4117	ng/mL	----
PFOA	Auto	4.577	3290830	4360678	9	4.5542	ng/mL	----
PFOS_1	Auto	4.733	257449	582549	13	3.2439	ng/mL	----
PFOS-13C_IS	Auto	4.733	582549	582549	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.733	582549	7003724	26	3.9072	ng/mL	----
PFNA-13C_IS	Auto	4.750	4940127	4940127	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.750	4940127	7003724	26	3.4461	ng/mL	----
PFNA	Auto	4.750	716319	4940127	11	1.0474	ng/mL	----
PFDA-13C_IS	Auto	4.932	4023807	4023807	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.932	4023807	7003724	26	2.9755	ng/mL	----
PFDA	Auto	4.931	43205	4023807	12	0.0658	ng/mL	----
8_2-FTS-13C_IS	Auto	4.930	636608	636608	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.930	636608	7003724	26	3.7891	ng/mL	----
8_2-FTS_1	Auto	4.929	39848	636608	15	0.3273	ng/mL	----
PFUnA	Auto	5.113	60115	3523750	14	0.0703	ng/mL	----
PFUnA-13C_IS	Auto	5.113	3523750	3523750	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.113	3523750	7003724	26	2.8959	ng/mL	----
PFDoA	Auto	5.296	16599	5040925	17	0.0173	ng/mL	----
PFDoA-13C	Auto	5.295	5040925	7003724	26	2.8442	ng/mL	----
PFDoA-13C_IS	Auto	5.295	5040925	5040925	17	5.0000	ng/mL	----
PFTrDA	Auto	5.457	12010	3842536	22	0.0034	ng/mL	----
PFTeDA	Auto	5.612	39204	3842536	22	0.0082	ng/mL	----
PFTeDA-13C	Auto	5.612	3842536	7003724	26	2.9281	ng/mL	----
PFTeDA-13C_IS	Auto	5.612	3842536	3842536	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.257	1525554	1525554	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.257	1525554	7003724	26	3.3512	ng/mL	----
FOSA	M	5.257	6928	1525554	18	0.0173	ng/mL	----
N-MeFOSAA	Auto	5.036	598	667769	19	0.0073	ng/mL	----
N-MeFOSAA-d3	Auto	5.037	667769	7003724	26	2.0102	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.037	667769	667769	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	722903	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.135	722903	722903	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.135	722903	7003724	26	2.1813	ng/mL	----
13C7-PFUnDA_IS	Auto	5.113	7003724	7003724	26	5.0000	ng/mL	----

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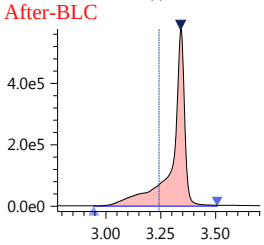
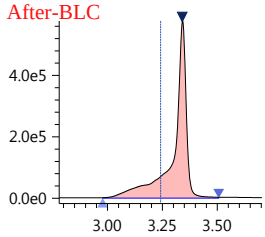
PFBA-13C_IS
Conc 5.0000
RT 3.340 Area 2224330
ISTD 216.90>172.15 (-) 5.77e5
After-BLC



PFBA-13C
Conc 3.5634
RT 3.340 Area 2222503
Q 216.90>172.15 (-) 5.77e5
After-BLC



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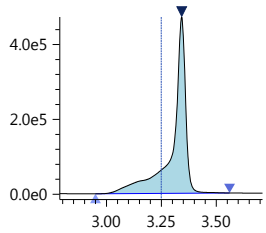
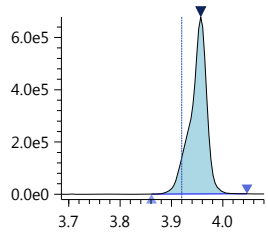
Conc 4.5364
RT 3.342 Area 1911162
Q 213.00>169.10 (-) 4.74e5



PFPeA-13C_IS
Conc 5.0000
RT 3.957 Area 1449864
ISTD 267.90>223.00 (-) 6.78e5



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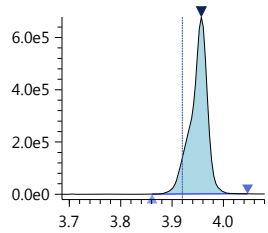
RT 3.957 Area 1449864
Q 267.90>223.00 (-) 6.78e5



PFPeA
Conc 13.5144
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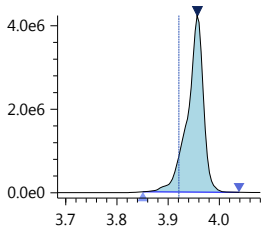
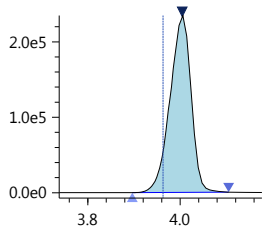
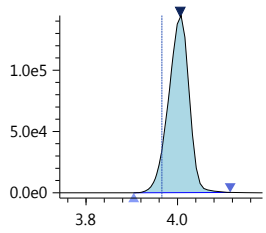
Q 263.05>219.10 (-) 4.25e6



PFBS_1
Conc 7.6051
RT 4.004 Area 740989
Q 299.00>80.00 (-) 2.35e5



PFBS-13C
Conc 2.4851
RT 4.006 Area 454013
Q 301.80>80.00 (-) 1.45e5



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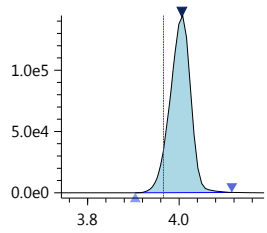

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Conc 5.0000
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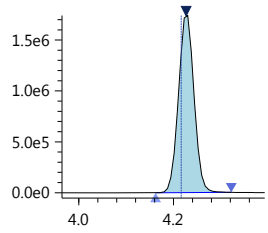
ISTD 314.90>270.10 (-) 1.74e6



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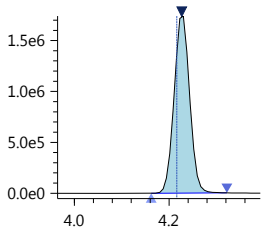
RT 4.227 Area 3998458
Q 314.90>270.10 (-) 1.74e6



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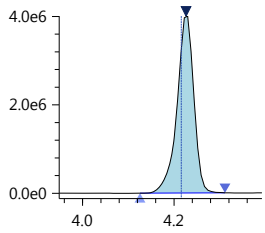
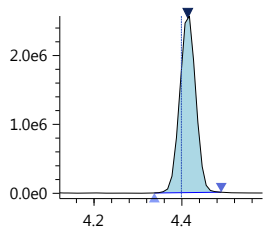
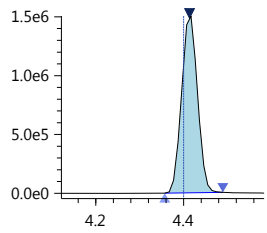
Conc 14.3467
RT 4.226 Area 10257018
Q 313.00>269.00 (-) 4.01e6



PFHpA
Conc 11.0048
RT 4.414 Area 6597045
Q 362.90>319.00 (-) 2.57e6



PFHpA-13C_IS
Conc 5.0000
RT 4.414 Area 3800552
ISTD 366.90>322.10 (-) 1.51e6



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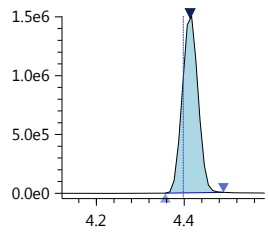
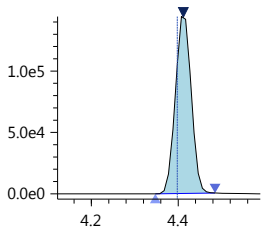
Conc 2.9639
RT 4.414 Area 3800552
Q 366.90>322.10 (-) 1.51e6



PFHxS-18O_IS
Conc 5.0000
RT 4.412 Area 369741
ISTD 402.70>84.05 (-) 1.44e5



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Conc 2.9422
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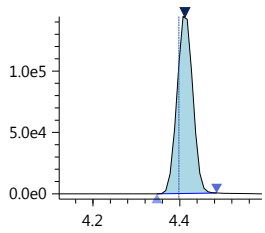
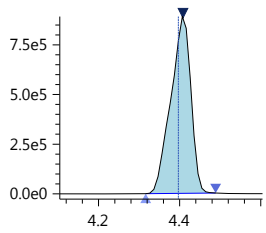
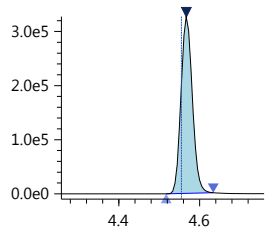
Q 402.70>84.05 (-) 1.44e5



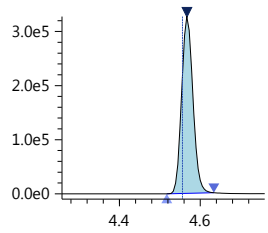
PFHxS_1
Conc 38.0939
RT 4.408 Area 3065306
Q 399.00>80.00 (-) 8.93e5



6_2-FTS-13C
Conc 4.4507
RT 4.567 Area 640917
Q 428.90>409.00 (-) 3.28e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 640917
ISTD 428.90>409.00 (-) 3.28e5



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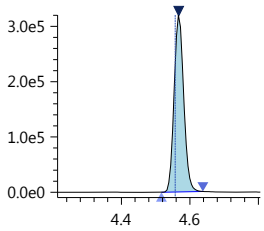
6_2-FTS_1
Conc 4.6345
RT 4.567 Area 628109
Q 427.00>407.00 (-) 3.21e5



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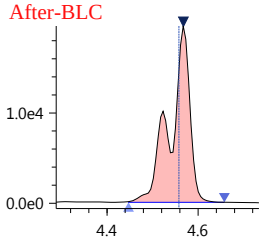
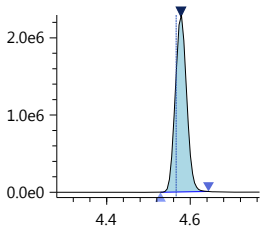
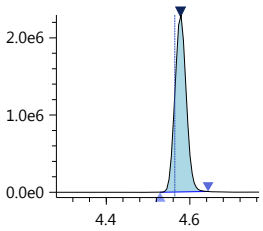
Conc 0.6473
RT 4.568 Area 58854
Q 449.00>80.15 (-) 1.96e4



PFOA-13C_IS
Conc 5.0000
RT 4.578 Area 4360678
ISTD 416.80>372.05 (-) 2.30e6



PFOA-13C
Conc 3.4117
RT 4.578 Area 4360678
Q 416.80>372.05 (-) 2.30e6



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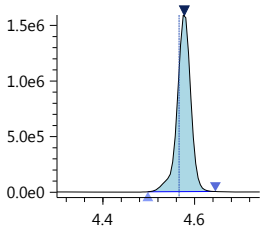
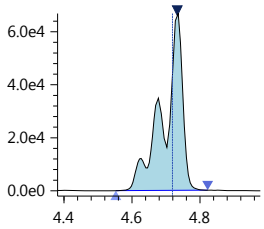
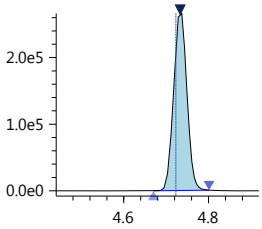
Conc 4.5542
RT 4.577 Area 3290830
Q 413.00>369.00 (-) 1.59e6



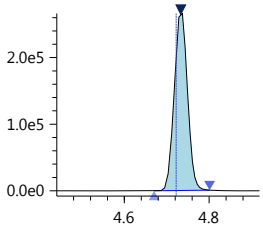
PFOS_1
Conc 3.2439
RT 4.733 Area 257449
Q 499.00>80.00 (-) 6.69e4



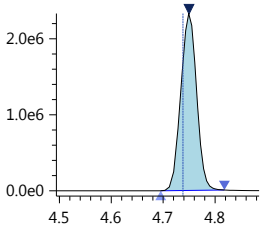
PFOS-13C_IS
Conc 5.0000
RT 4.733 Area 582549
ISTD 502.80>80.05 (-) 2.66e5



PFOS-13C
Conc 3.9072
RT 4.733 Area 582549
Q 502.80>80.05 (-) 2.66e5



PFNA-13C_IS
Conc 5.0000
RT 4.750 Area 4940127
ISTD 467.80>423.00 (-) 2.33e6



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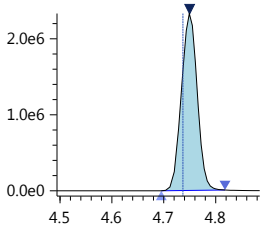
Conc 3.4461
RT 4.750 Area 4940127
Q 467.80>423.00 (-) 2.33e6



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Conc 1.0474
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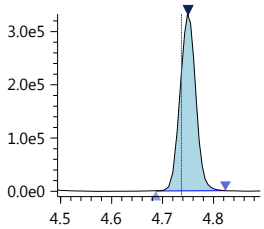
Q 463.00>418.90 (-) 3.33e5



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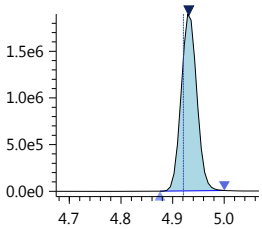
Conc 5.0000
RT 4.932 Area 4023807
ISTD 514.80>469.95 (-) 1.90e6



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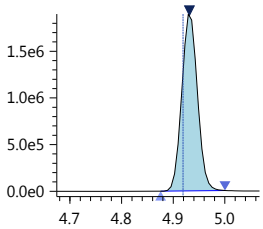

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RT 4.931 Area 43205
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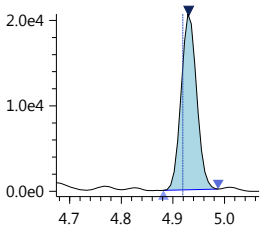
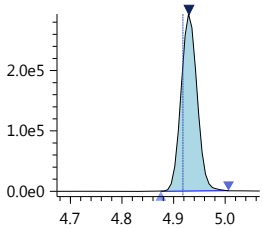


8_2-FTS-13C_IS
Conc 5.0000
RT 4.930 Area 636608
ISTD 528.80>509.00 (-) 2.94e5



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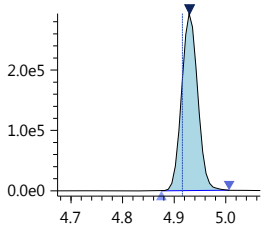
RT 4.930 Area 636608
Q 528.80>509.00 (-) 2.94e5



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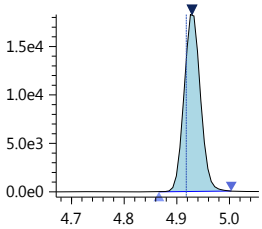

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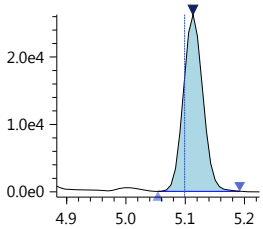
Q 563.00>518.90 (-) 2.63e4



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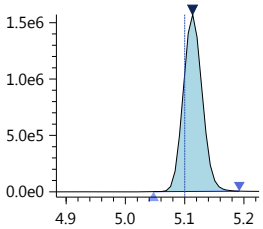

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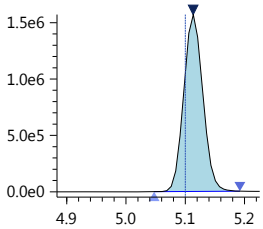

Insight Report

Printed at 3/21/2019 9:48:23 AM

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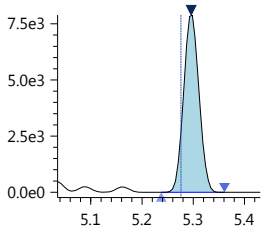
RT 5.296 Area 16599
Q 613.05>569.00 (-) 7.89e3



PFDoA-13C
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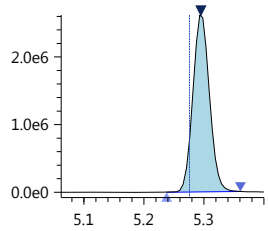
RT 5.295 Area 5040925
Q 614.80>569.95 (-) 2.62e6



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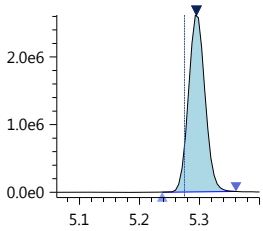
ISTD 614.80>569.95 (-) 2.62e6



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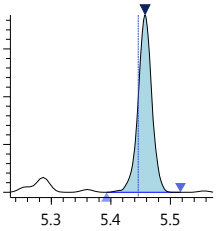

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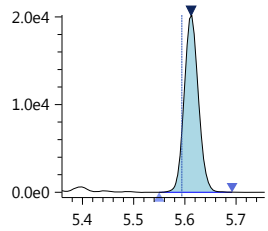

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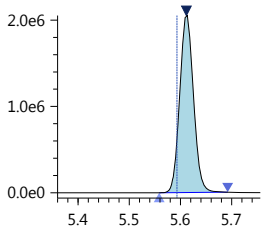

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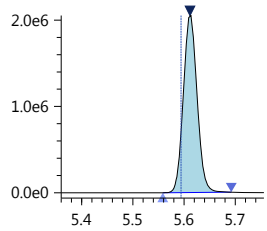
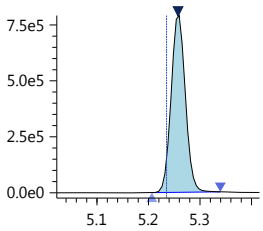


FOSA-13C_IS
Conc 5.0000
RT 5.257 Area 1525554
ISTD 506.00>78.05 (-) 7.92e5



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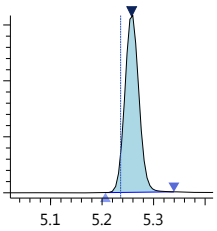
Q 506.00>78.05 (-) 7.92e5



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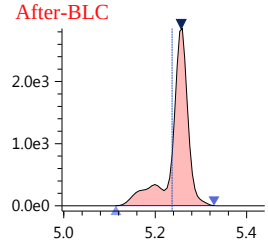
Q 498.20>78.00 (-) 2.85e3



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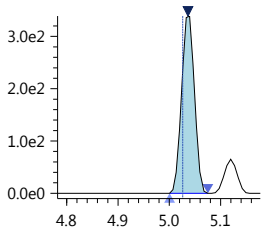
Q 570.20>419.00 (-) 3.39e2



N-MeFOSAA-d3
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RT 5.037 Area 667769
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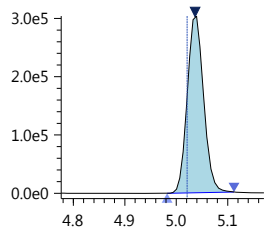

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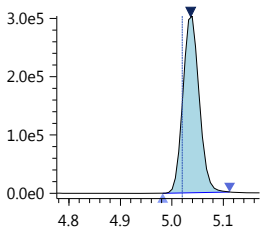
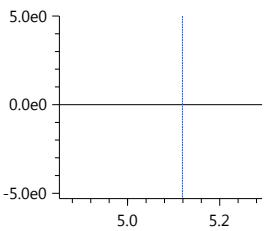
ISTD 572.80>419.05 (-) 3.04e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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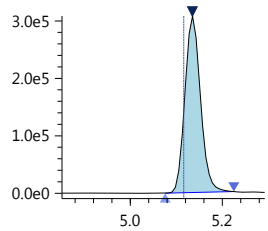
ISTD 588.80>419.00 (-) 3.08e5



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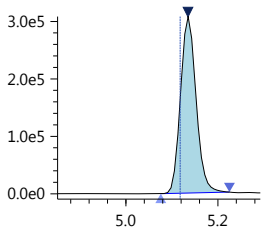

13C7-PFUnDA_IS
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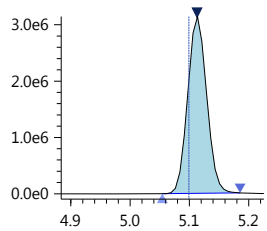
RT 5.113 Area 7003724
ISTD 570.00>525.00 (-) 3.15e6



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Printed at 3/21/2019 9:16:10 AM

190319_026

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Acquired by: System Administrator
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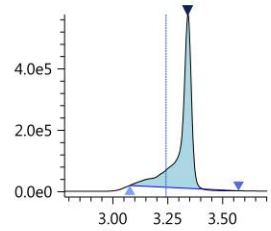
PFBA-13C_IS
Conc 5.0000
RT 3.340 Area 1856314
ISTD 216.90>172.15 (-) 5.77e5



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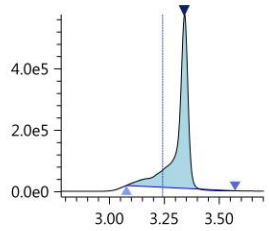

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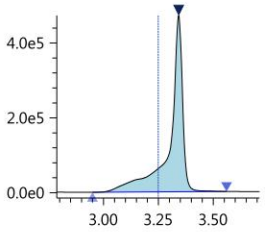
RT 3.342 Area 1911162
Q 213.00>169.10 (-) 4.74e5



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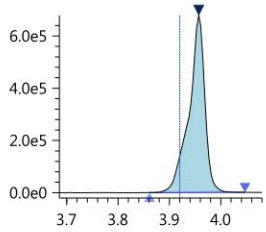

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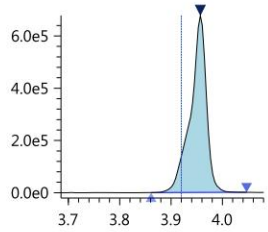
Q 267.90>223.00 (-) 6.78e5



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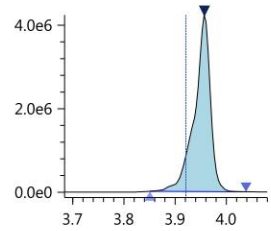
Q 263.05>219.10 (-) 4.25e6



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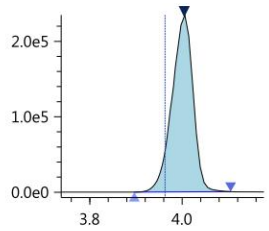
Q 299.00>80.00 (-) 2.35e5



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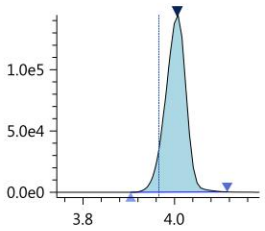

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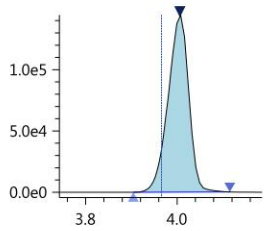

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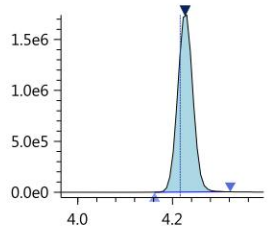

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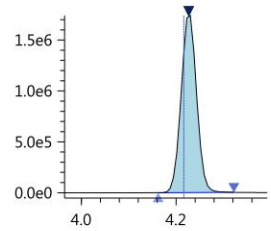

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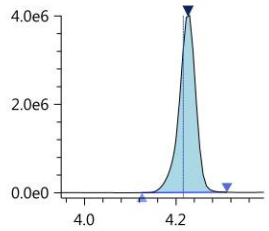
Conc 14.3467
RT 4.226 Area 10257018
Q 313.00>269.00 (-) 4.01e6



HPFO_DA
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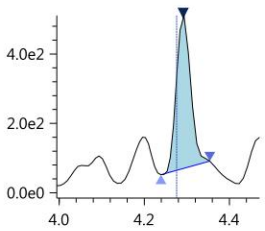
RT 4.291 Area 1026
Q 329.00>169.00 (-) 5.11e2



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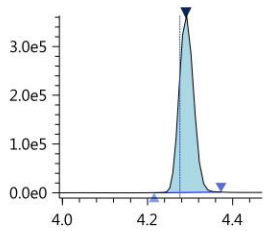
ISTD 332.00>286.80 (-) 3.64e5



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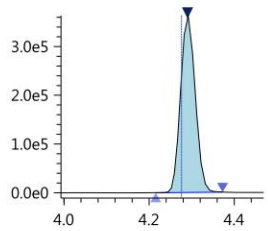
Q 332.00>286.80 (-) 3.64e5



4_2-FTS-13C_IS
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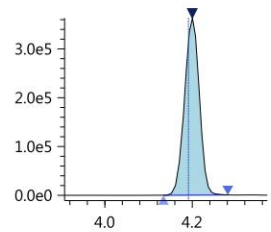
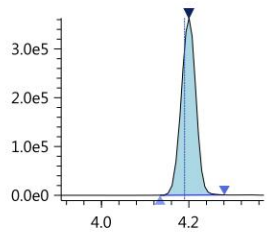
RT 4.200 Area 851549
ISTD 328.80>309.05 (-) 3.63e5



4_2-FTS-13C
Conc 5.2314
RT 4.200 Area 851549
Q 328.80>309.05 (-) 3.63e5



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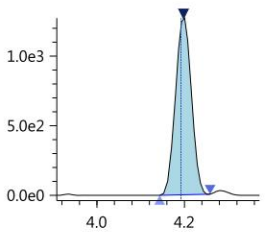
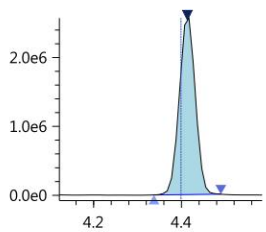
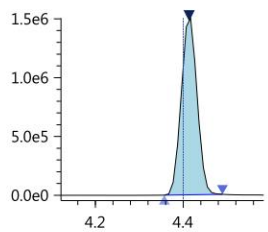
Conc 0.0164
RT 4.198 Area 3220
Q 327.00>307.05 (-) 1.27e3



PFHpA
Conc 11.0048
RT 4.414 Area 6597045
Q 362.90>319.00 (-) 2.57e6



PFHpA-13C_IS
Conc 5.0000
RT 4.414 Area 3800552
ISTD 366.90>322.10 (-) 1.51e6



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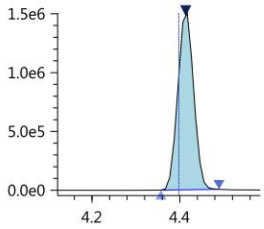
PFHpA-13C
Conc 2.9639
RT 4.414 Area 3800552
Q 366.90>322.10 (-) 1.51e6



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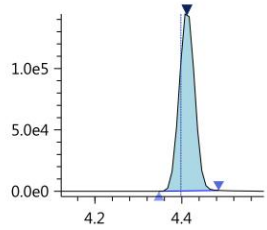
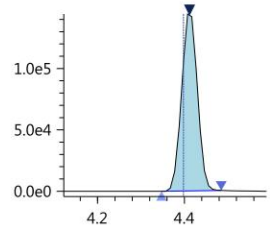
Conc 5.0000
RT 4.412 Area 369741
ISTD 402.70>84.05 (-) 1.44e5



PFHxS-18O
Conc 2.9422
RT 4.412 Area 369741
Q 402.70>84.05 (-) 1.44e5



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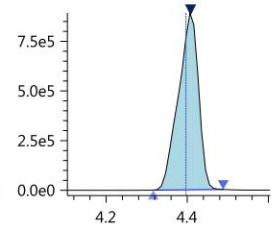
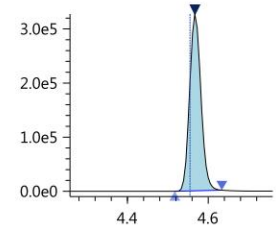
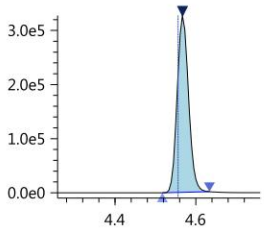
Conc 38.0939
RT 4.408 Area 3065306
Q 399.00>80.00 (-) 8.93e5



6_2-FTS-13C
Conc 4.4507
RT 4.567 Area 640917
Q 428.90>409.00 (-) 3.28e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.567 Area 640917
ISTD 428.90>409.00 (-) 3.28e5



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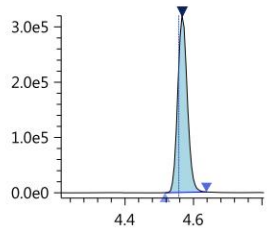
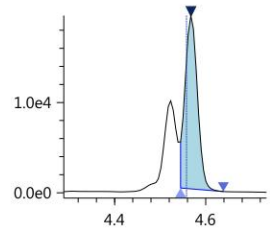
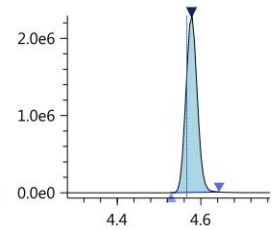
Conc 4.6345
RT 4.567 Area 628109
Q 427.00>407.00 (-) 3.21e5



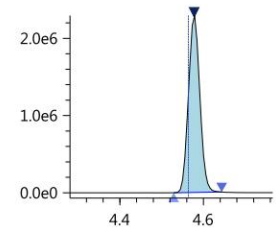
PFHpS_1
Conc 0.4008
RT 4.568 Area 36441
Q 449.00>80.15 (-) 1.96e4



PFOA-13C_IS
Conc 5.0000
RT 4.578 Area 4360678
ISTD 416.80>372.05 (-) 2.30e6



PFOA-13C
Conc 3.4117
RT 4.578 Area 4360678
Q 416.80>372.05 (-) 2.30e6



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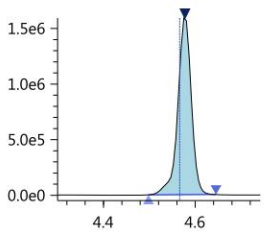
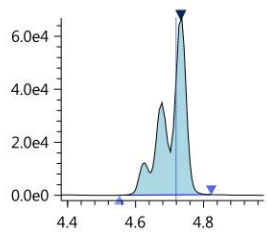
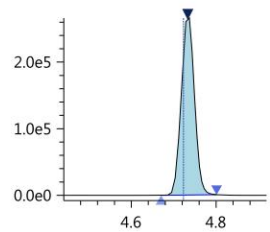
Conc 4.5542
RT 4.577 Area 3290830
Q 413.00>369.00 (-) 1.59e6



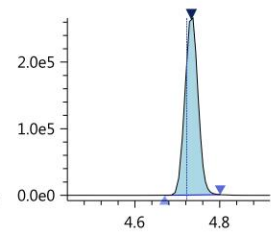
PFOS_1
Conc 3.2439
RT 4.733 Area 257449
Q 499.00>80.00 (-) 6.69e4



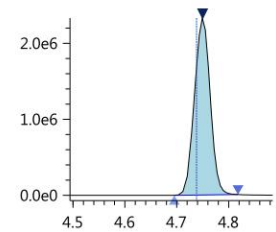
PFOS-13C_IS
Conc 5.0000
RT 4.733 Area 582549
ISTD 502.80>80.05 (-) 2.66e5



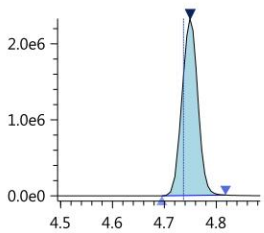
PFOS-13C
Conc 3.9072
RT 4.733 Area 582549
Q 502.80>80.05 (-) 2.66e5



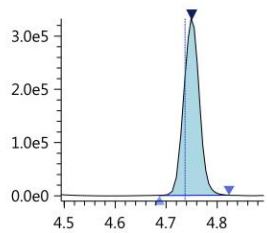
PFNA-13C_IS
Conc 5.0000
RT 4.750 Area 4940127
ISTD 467.80>423.00 (-) 2.33e6



PFNA-13C
Conc 3.4461
RT 4.750 Area 4940127
Q 467.80>423.00 (-) 2.33e6



PFNA
Conc 1.0474
RT 4.750 Area 716319
Q 463.00>418.90 (-) 3.33e5



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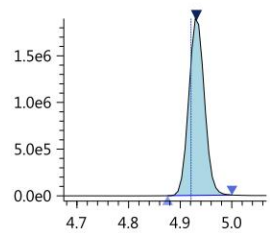
Conc 5.0000
RT 4.932 Area 4023807
ISTD 514.80>469.95 (-) 1.90e6



PFDA-13C
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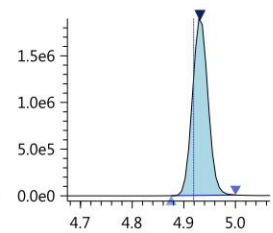
Q 514.80>469.95 (-) 1.90e6



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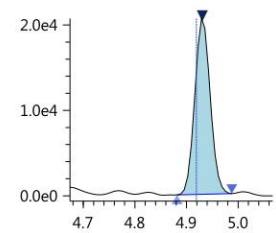
RT 4.931 Area 43205
Q 513.00>468.80 (-) 2.07e4



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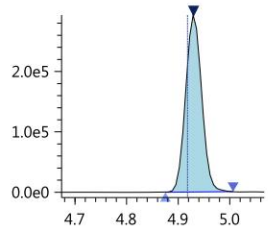
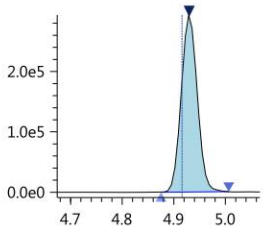
8_2-FTS-13C_IS
Conc 5.0000
RT 4.930 Area 636608
ISTD 528.80>509.00 (-) 2.94e5



8_2-FTS-13C
Conc 3.7891
RT 4.930 Area 636608
Q 528.80>509.00 (-) 2.94e5



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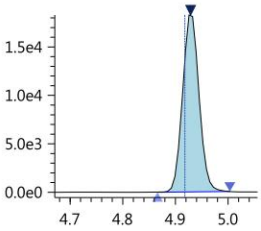
Conc 0.3273
RT 4.929 Area 39848
Q 527.10>506.90 (-) 1.83e4



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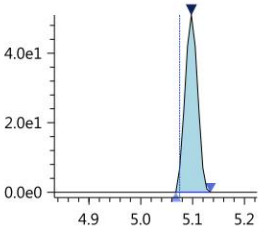
Conc 0.0009
RT 5.097 Area 88
Q 599.00>79.90 (-) 5.10e1



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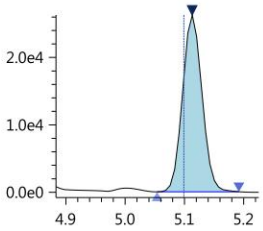
Conc 0.0703
RT 5.113 Area 60115
Q 563.00>518.90 (-) 2.63e4



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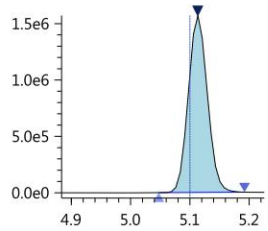
ISTD 564.80>519.95 (-) 1.57e6



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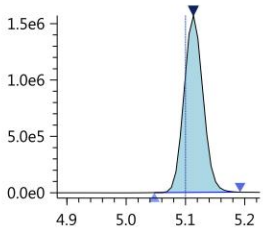
Conc 2.8959
RT 5.113 Area 3523750
Q 564.80>519.95 (-) 1.57e6



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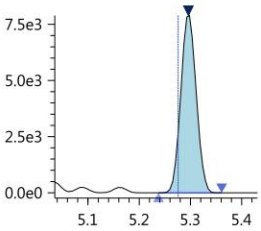
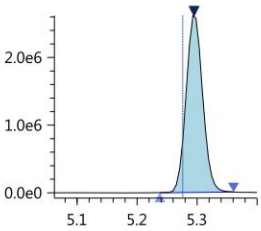
Conc 0.0173
RT 5.296 Area 16599
Q 613.05>569.00 (-) 7.89e3



PFDoA-13C
Conc 2.8442
RT 5.295 Area 5040925
Q 614.80>569.95 (-) 2.62e6



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Conc 5.0000
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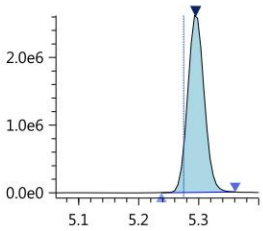
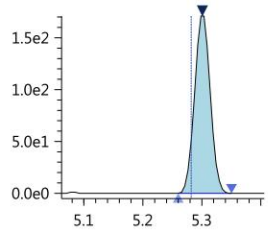
ISTD 614.80>569.95 (-) 2.62e6



10_2-FtS_1
Conc 0.0022
RT 5.301 Area 320
Q 627.00>606.95 (-) 1.71e2



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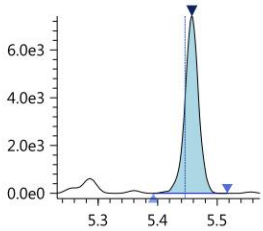
Conc 0.0034
RT 5.457 Area 12010
Q 663.00>618.90 (-) 7.42e3



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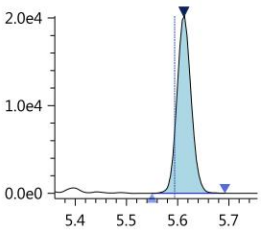
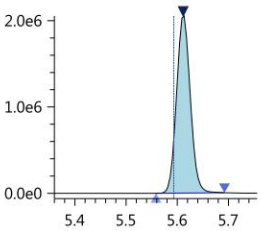
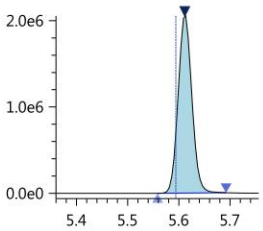
Conc 0.0082
RT 5.612 Area 39204
Q 713.40>669.00 (-) 2.02e4



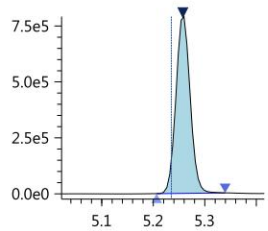
PFTeDA-13C
Conc 2.9281
RT 5.612 Area 3842536
Q 714.70>669.90 (-) 2.05e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.612 Area 3842536
ISTD 714.70>669.90 (-) 2.05e6



FOSA-13C_IS
Conc 5.0000
RT 5.257 Area 1525554
ISTD 506.00>78.05 (-) 7.92e5



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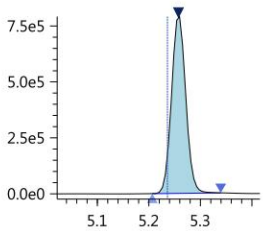
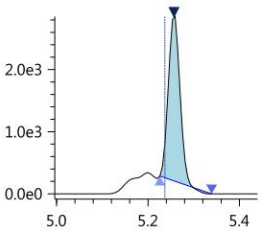
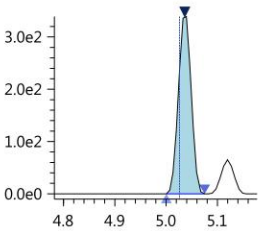
Conc 3.3512
RT 5.257 Area 1525554
Q 506.00>78.05 (-) 7.92e5



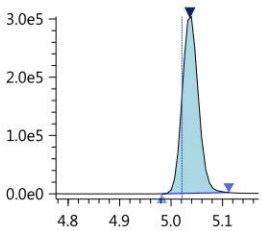
FOSA
Conc 0.0116
RT 5.257 Area 4672
Q 498.20>78.00 (-) 2.85e3



N-MeFOSAA
Conc 0.0073
RT 5.036 Area 598
Q 570.20>419.00 (-) 3.39e2



N-MeFOSAA-d3
Conc 2.0102
RT 5.037 Area 667769
Q 572.80>419.05 (-) 3.04e5



Insight Report

Printed at 3/21/2019 9:16:10 AM

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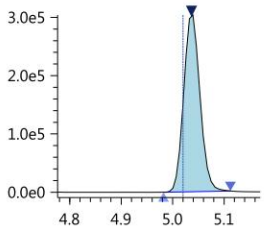
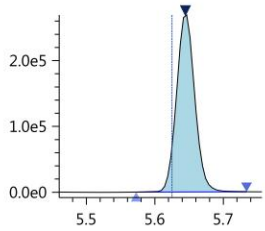
Conc 5.0000
RT 5.037 Area 667769
ISTD 572.80>419.05 (-) 3.04e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.645 Area 501317
ISTD 514.90>168.90 (-) 2.69e5



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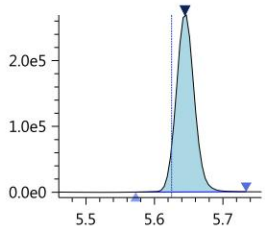
Conc 3.0304
RT 5.645 Area 501317
Q 514.90>168.90 (-) 2.69e5



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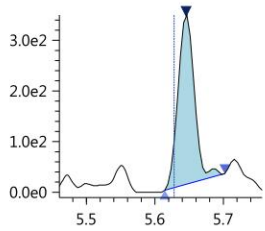
Conc 0.0047
RT 5.646 Area 557
Q 512.00>169.10 (-) 3.50e2



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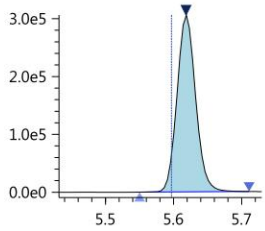
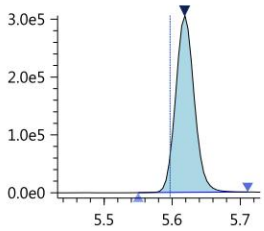
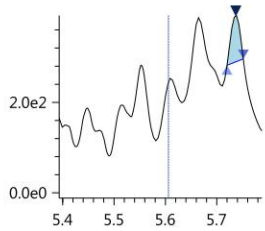
Conc 3.3260
RT 5.618 Area 581855
Q 622.70>59.10 (-) 3.06e5



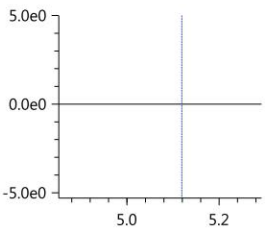
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.618 Area 581855
ISTD 622.70>59.10 (-) 3.06e5



N-MeFOSE
Conc 0.0008
RT 5.737 Area 121
Q 616.00>59.00 (-) 3.92e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



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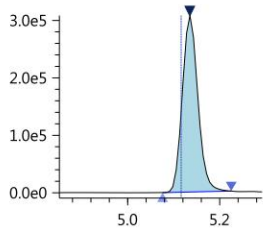
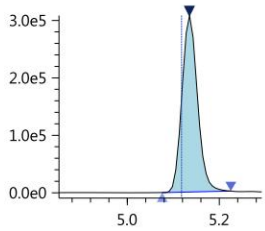
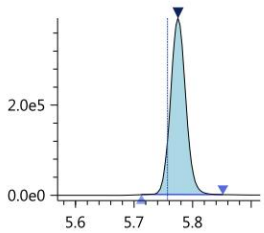
Conc 5.0000
RT 5.135 Area 722903
ISTD 588.80>419.00 (-) 3.08e5



N-EtFOSAA-d5
Conc 2.1813
RT 5.135 Area 722903
Q 588.80>419.00 (-) 3.08e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 712757
ISTD 530.90>169.15 (-) 3.93e5



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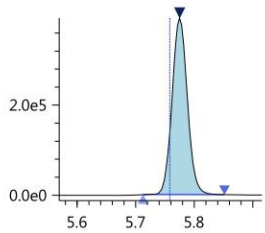
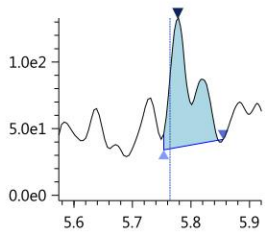
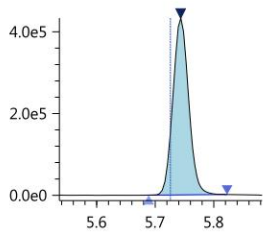
Conc 3.1117
RT 5.775 Area 712757
Q 530.90>169.15 (-) 3.93e5



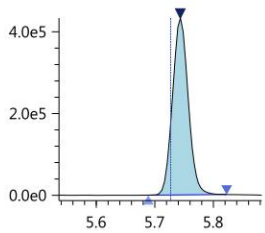
N-EtFOSA
Conc 0.0110
RT 5.778 Area 261
Q 526.90>169.10 (-) 1.33e2



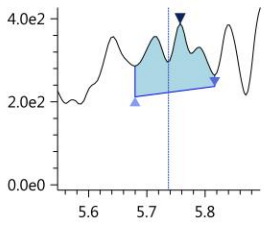
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.743 Area 810735
ISTD 638.70>59.10 (-) 4.34e5



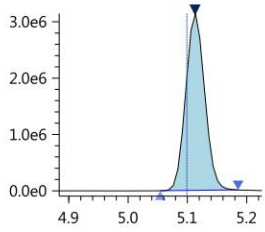
N-EtFOSE-d9
Conc 3.3576
RT 5.743 Area 810735
Q 638.70>59.10 (-) 4.34e5



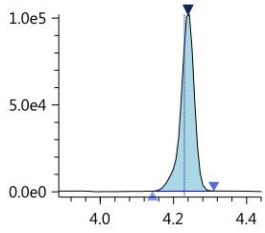
N-EtFOSE
Conc 0.0054
RT 5.757 Area 822
Q 630.00>58.90 (-) 4.27e2



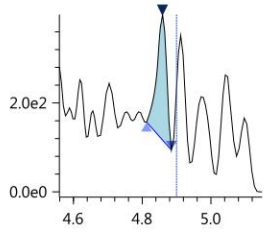
13C7-PFUnDA_IS
Conc 5.0000
RT 5.113 Area 7003724
ISTD 570.00>525.00 (-) 3.15e6



PFPeS
Conc 4.4612
RT 4.240 Area 262285
Q 349.00>99.00 (-) 1.02e5



PFNS
Conc 0.0068
RT 4.859 Area 551
Q 549.00>99.00 (-) 3.99e2



1st EJD 03/28/19
2nd 03/28/19

Validation Report

Data File: J:\LCMS06\Data\190325_b6\190325_015
Lab ID: K1902064-010
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/25/19 11:37
Batch ID: 629106
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	18O2-PFHxS	138	70	130	narrate native ok

Primary Review: _____

Secondary Review: _____

1st EJD 03/28/19
2nd 03/28/19

Quantitation Report

Data File:	J:\LCMS06\Data\190325_b6\190325_015	**Instrument:**	K-LCMS-06
Acqu Date:	3/25/19 11:37	**Vial:**	4
Run Type:	N/A	**Dilution:**	10
Lab ID:	K1902064-010	**Raw Units:**	ng/mL

Bottle ID:	K1902064-010.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629106	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.088	+0.00	6018953	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
18O2-PFHxS	4.395	+0.00	51891	0.4805	96	26 - 122	Y
13C4-PFOS	4.713	+0.00	56454	0.4406	88	25 - 121	N
13C5-PFPeA	3.959	+0.02	137713	0.3964	79	27 - 138	N
13C2-PFHxA	4.217	+0.01	378805	0.3535	71	28 - 132	N
13C4-PFHpA	4.395	+0.00	476989	0.4328	87	19 - 139	N
13C2-6:2 FTS	4.553	+0.01	59912	0.4841	97	10 - 226	N

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorohexane sulfonic acid (PFHxS)	4.386	0.00	394738	34.9536	930		Y
Perfluorooctane sulfonic acid (PFOS)	4.711	+0.00	27315	3.5515	95		N
Perfluoropentanoic acid (PFPeA)	3.959	+0.02	893736	14.0354	370		N
Perfluorohexanoic acid (PFHxA)	4.214	+0.00	1069228	15.7897	420		N
Perfluoroheptanoic acid (PFHpA)	4.396	+0.00	784257	10.4218	280		N
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.554	+0.01	63564	5.0173	130		N

Prep Amount:	300.0000 mL	**Dilution:**	10
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

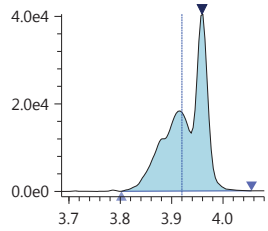
Printed at 3/28/2019 2:02:44 PM

190325_015

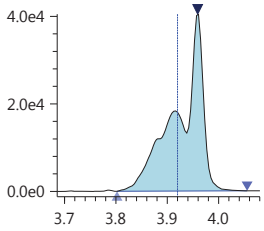
Sample ID: K1902064-010
Date acquired: 3/25/2019 11:37:51 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_015.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFPeA-13C_IS	Auto	3.959	137713	137713	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.959	137713	6018953	26	0.3964	ng/mL	----
PFPeA	Auto	3.959	893736	137713	4	14.0354	ng/mL	----
PFHxA-13C_IS	Auto	4.217	378805	378805	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.217	378805	6018953	26	0.3535	ng/mL	----
PFHxA	Auto	4.214	1069228	378805	6	15.7897	ng/mL	----
PFHpA	Auto	4.396	784257	476989	8	10.4218	ng/mL	----
PFHpA-13C_IS	Auto	4.395	476989	476989	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.395	476989	6018953	26	0.4328	ng/mL	----
PFHxS-18O_IS	Auto	4.395	51891	51891	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.395	51891	6018953	26	0.4805	ng/mL	----
PFHxS_1	Auto	4.386	394738	51891	7	34.9536	ng/mL	----
6_2-FTS-13C	Auto	4.553	59912	6018953	26	0.4841	ng/mL	----
6_2-FTS-13C_IS	Auto	4.553	59912	59912	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.554	63564	59912	10	5.0173	ng/mL	----
PFOS_1	Auto	4.711	27315	56454	13	3.5515	ng/mL	----
PFOS-13C_IS	Auto	4.713	56454	56454	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.713	56454	6018953	26	0.4406	ng/mL	----
13C7-PFUnDA_IS	Auto	5.088	6018953	6018953	26	5.0000	ng/mL	----

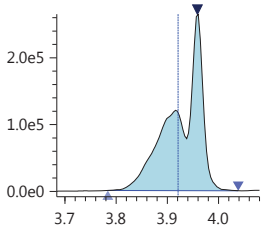
PFPeA-13C_IS
Conc 5.0000
RT 3.959 Area 137713
ISTD 267.90>223.00 (-) 4.05e4



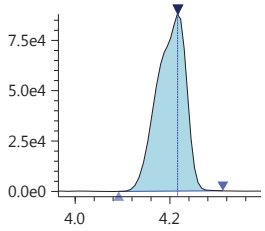
PFPeA-13C
Conc 0.3964
RT 3.959 Area 137713
Q 267.90>223.00 (-) 4.05e4



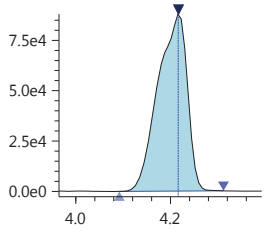
PFPeA
Conc 14.0354
RT 3.959 Area 893736
Q 263.05>219.10 (-) 2.65e5



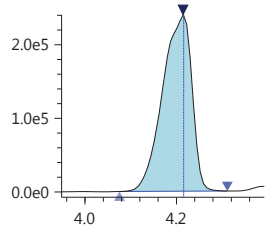
PFHxA-13C_IS
Conc 5.0000
RT 4.217 Area 378805
ISTD 314.90>270.10 (-) 8.80e4



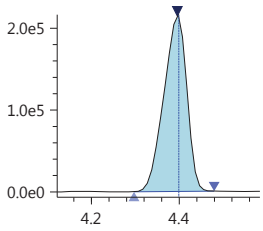
PFHxA-13C
Conc 0.3535
RT 4.217 Area 378805
Q 314.90>270.10 (-) 8.80e4



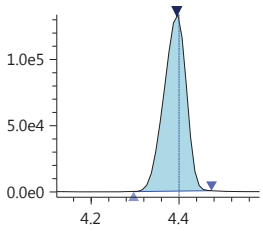
PFHxA
Conc 15.7897
RT 4.214 Area 1069228
Q 313.00>269.00 (-) 2.41e5



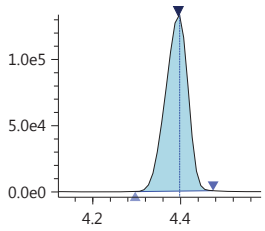
PFHpA
Conc 10.4218
RT 4.396 Area 784257
Q 362.90>319.00 (-) 2.17e5



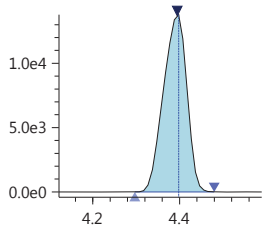
PFHpA-13C_IS
Conc 5.0000
RT 4.395 Area 476989
ISTD 366.90>322.10 (-) 1.34e5



PFHpA-13C
Conc 0.4328
RT 4.395 Area 476989
Q 366.90>322.10 (-) 1.34e5



PFHxS-18O_IS
Conc 5.0000
RT 4.395 Area 51891
ISTD 402.70>84.05 (-) 1.38e4



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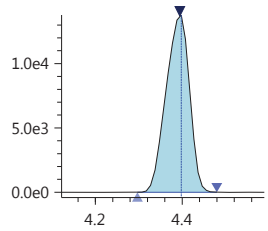
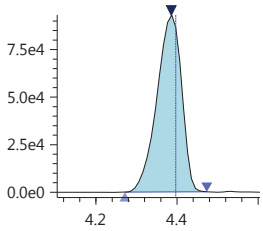
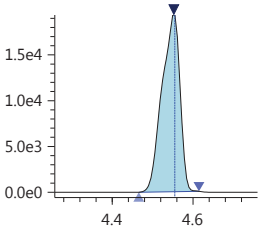
PFHxS-18O
Conc 0.4805
RT 4.395 Area 51891
Q 402.70>84.05 (-) 1.38e4



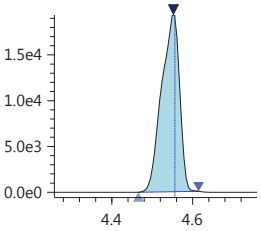
PFHxS_1
Conc 34.9536
RT 4.386 Area 394738
Q 399.00>80.00 (-) 9.32e4



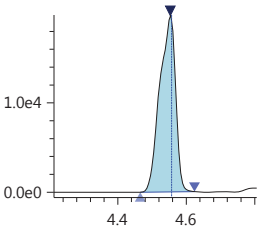
6_2-FTS-13C
Conc 0.4841
RT 4.553 Area 59912
Q 428.90>409.00 (-) 1.94e4



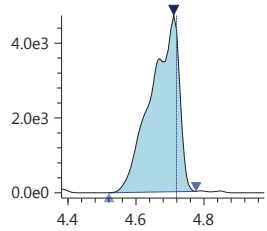
6_2-FTS-13C_IS
Conc 5.0000
RT 4.553 Area 59912
ISTD 428.90>409.00 (-) 1.94e4



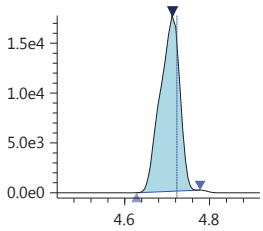
6_2-FTS_1
Conc 5.0173
RT 4.554 Area 63564
Q 427.00>407.00 (-) 1.98e4



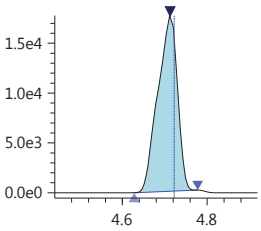
PFOS_1
Conc 3.5515
RT 4.711 Area 27315
Q 499.00>80.00 (-) 4.74e3



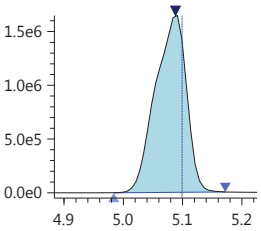
PFOS-13C_IS
Conc 5.0000
RT 4.713 Area 56454
ISTD 502.80>80.05 (-) 1.78e4



PFOS-13C
Conc 0.4406
RT 4.713 Area 56454
Q 502.80>80.05 (-) 1.78e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.088 Area 6018953
ISTD 570.00>525.00 (-) 1.65e6



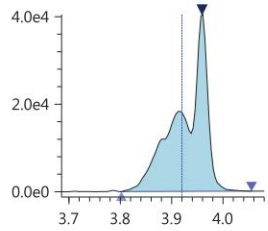
Insight Report

Printed at 3/28/2019 1:52:07 PM

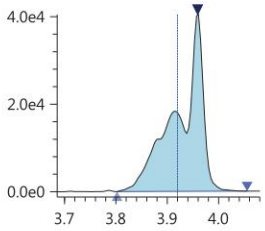
190325_015

Sample ID: K1902064-010
Date acquired: 3/25/2019 11:37:51 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_015.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 2

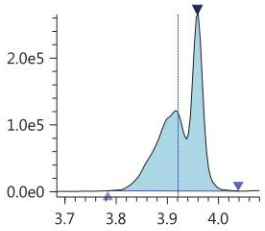
PFPeA-13C_IS
Conc 5.0000
RT 3.959 Area 137713
ISTD 267.90>223.00 (-) 4.05e4



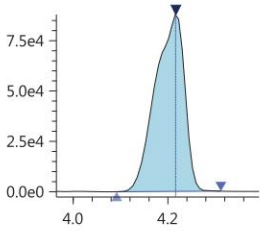
PFPeA-13C
Conc 0.3964
RT 3.959 Area 137713
Q 267.90>223.00 (-) 4.05e4



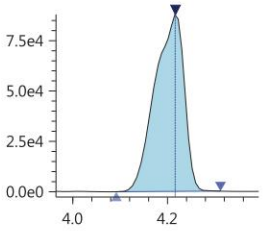
PFPeA
Conc 14.0354
RT 3.959 Area 893736
Q 263.05>219.10 (-) 2.65e5



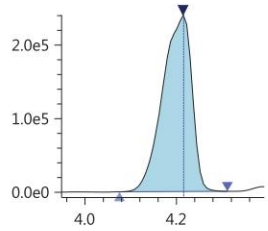
PFHxA-13C_IS
Conc 5.0000
RT 4.217 Area 378805
ISTD 314.90>270.10 (-) 8.80e4



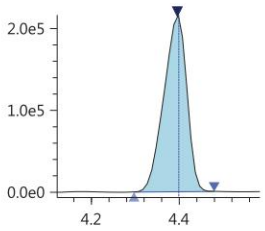
PFHxA-13C
Conc 0.3535
RT 4.217 Area 378805
Q 314.90>270.10 (-) 8.80e4



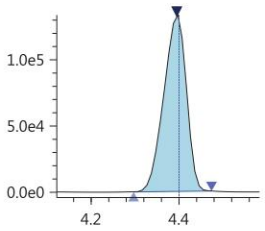
PFHxA
Conc 15.7897
RT 4.214 Area 1069228
Q 313.00>269.00 (-) 2.41e5



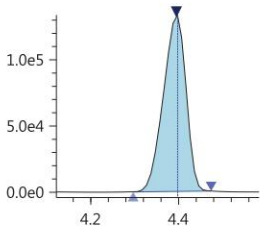
PFHpA
Conc 10.4218
RT 4.396 Area 784257
Q 362.90>319.00 (-) 2.17e5



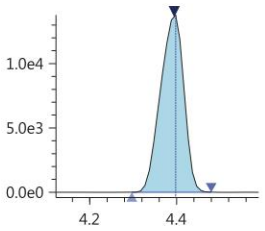
PFHpA-13C_IS
Conc 5.0000
RT 4.395 Area 476989
ISTD 366.90>322.10 (-) 1.34e5



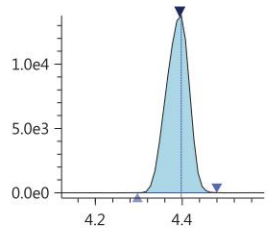
PFHpA-13C
Conc 0.4328
RT 4.395 Area 476989
Q 366.90>322.10 (-) 1.34e5



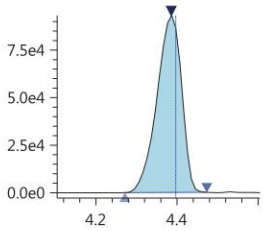
PFHxS-18O_IS
Conc 5.0000
RT 4.395 Area 51891
ISTD 402.70>84.05 (-) 1.38e4



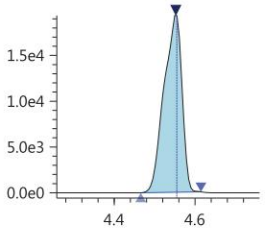
PFHxS-18O
Conc 0.4805
RT 4.395 Area 51891
Q 402.70>84.05 (-) 1.38e4



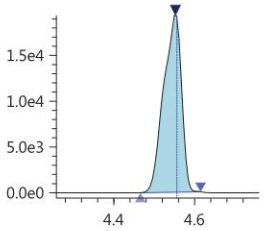
PFHxS_1
Conc 34.9536
RT 4.386 Area 394738
Q 399.00>80.00 (-) 9.32e4



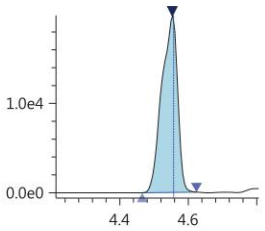
6_2-FTS-13C
Conc 0.4841
RT 4.553 Area 59912
Q 428.90>409.00 (-) 1.94e4



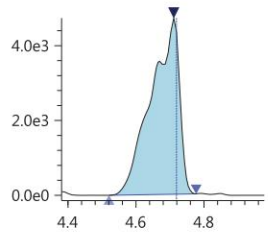
6_2-FTS-13C_IS
Conc 5.0000
RT 4.553 Area 59912
ISTD 428.90>409.00 (-) 1.94e4



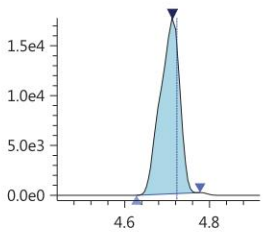
6_2-FTS_1
Conc 5.0173
RT 4.554 Area 63564
Q 427.00>407.00 (-) 1.98e4



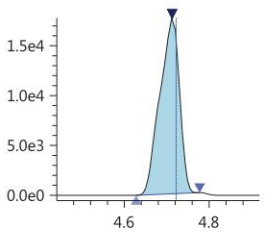
PFOS_1
Conc 3.5515
RT 4.711 Area 27315
Q 499.00>80.00 (-) 4.74e3



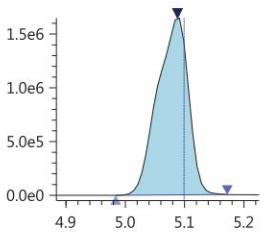
PFOS-13C_IS
Conc 5.0000
RT 4.713 Area 56454
ISTD 502.80>80.05 (-) 1.78e4



PFOS-13C
Conc 0.4406
RT 4.713 Area 56454
Q 502.80>80.05 (-) 1.78e4



13C7-PFUnDA_IS
Conc 5.0000
RT 5.088 Area 6018953
ISTD 570.00>525.00 (-) 1.65e6



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_029
Lab ID: K1902064-011
RunType: N/A
Matrix: Ground Water

Date Acquired: 3/19/19 14:50
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Printed: 3/21/19 10:05
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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_029	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:50	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-011	**Raw Units:**	ng/mL

Bottle ID:	K1902064-011.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	K1902064
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.108	-0.01	7829657	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.009	0.00	639108	3.1292	63	20 - 109	Y
18O2-PFHxS	4.407	0.00	580029	4.1287	83	26 - 122	Y
13C4-PFOS	4.731	0.00	661155	3.9666	79	25 - 121	Y
13C4-PFBA	3.220	-0.14	2305885	3.3071	66	27 - 124	Y
13C5-PFPeA	3.959	0.00	1590629	3.5193	70	27 - 138	Y
13C2-PFHxA	4.227	0.00	4639691	3.3288	67	28 - 132	Y
13C4-PFHpA	4.408	0.00	5260715	3.6698	73	19 - 139	Y
13C4-PFOA	4.576		5073291	3.5506	71	22 - 130	Y
13C5-PFNA	4.747	0.00	5688248	3.5494	71	20 - 127	Y
13C2-PFDA	4.928	0.00	5157868	3.4117	68	24 - 125	Y
13C2-PFUnDA	5.108	-0.01	4806886	3.5337	71	22 - 125	Y
13C2-PFDoDA	5.286	0.00	6135492	3.0966	62	19 - 122	Y
13C2-PFTeDA	5.603	+0.00	4735082	3.2276	65	13 - 124	Y
13C8-FOSA	5.249	+0.00	1500232	2.9479	59	18 - 109	Y
D3-MeFOSAA	5.033	-0.01	795938	2.1432	43	9 - 123	Y
D5-EtFOSAA	5.129	0.00	855317	2.3086	46	12 - 126	Y
13C2-6:2 FTS	4.566	0.00	705985	4.3854	88	10 - 226	Y
13C2-8:2 FTS	4.926	0.00	732148	3.8980	78	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)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.396	-0.01	1293	0.0102	0.27	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: 3/21/19 10:05
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1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_029	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:50	**Vial:**	13
Run Type:	N/A	**Dilution:**	1
Lab ID:	K1902064-011	**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)	4.720	-0.01	567	0.0063	0.17	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.908	-0.05	92693	0.0004	0.010	U	Y
Perfluorohexanoic acid (PFHxA)	4.218	-0.01	36968	0.0095	0.25	U	Y
Perfluoroheptanoic acid (PFHpA)	4.408	0.00	23638	-0.0113	0	U	Y
Perfluorooctanoic acid (PFOA)	4.559	-0.02	24688	0.0042	0.11	U	Y
Perfluorononanoic acid (PFNA)	4.718	-0.03	11548	-0.0020	0	U	Y
Perfluorodecanoic acid (PFDA)	4.902	-0.03	12999	0.0154	0.40	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.105	-0.01	25458	-0.0059	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.278	-0.01	13837	0.0086	0.23	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.450	-0.01	12122	0.0002	0.0052	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.603	+0.00	47059	0.0044	0.12	U	Y
Perfluorooctane sulfonamide (FOSA)	5.248	+0.00	1805	0.0046	0.12	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.050	+0.01	414	0.0042	0.11	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.157	+0.02	211	0.0021	0.055	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.574	+0.01	266	0.0018	0.047	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0		0	0	0	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: 3/21/19 10:05

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_029

Sample ID: K1902064-011
Date acquired: 3/19/2019 2:50:36 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_029.lcd
Vial: 15 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.220	2305885	2305885	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.220	2305885	7829657	26	3.3071	ng/mL	----
PFBA	ND(W/B)	----	----	2305885	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.959	1590629	1590629	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.959	1590629	7829657	26	3.5193	ng/mL	----
PFPeA	Auto	3.908	92693	1590629	4	0.0004	ng/mL	----
PFBS_1	ND(W/B)	----	----	639108	16	----	ng/mL	----
PFBS-13C	Auto	4.009	639108	7829657	26	3.1292	ng/mL	----
PFBS-13C_IS	Auto	4.009	639108	639108	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.227	4639691	4639691	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.227	4639691	7829657	26	3.3288	ng/mL	----
PFHxA	M	4.218	36968	4639691	6	0.0095	ng/mL	----
PFHpA	M	4.408	23638	5260715	8	-0.0113	ng/mL	----
PFHpA-13C_IS	Auto	4.408	5260715	5260715	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.408	5260715	7829657	26	3.6698	ng/mL	----
PFHxS-18O_IS	Auto	4.407	580029	580029	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.407	580029	7829657	26	4.1287	ng/mL	----
PFHxS_1	Auto	4.396	1293	580029	7	0.0102	ng/mL	----
6_2-FTS-13C	Auto	4.566	705985	7829657	26	4.3854	ng/mL	----
6_2-FTS-13C_IS	Auto	4.566	705985	705985	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.574	266	705985	10	0.0018	ng/mL	----
PFHpS_1	ND(W/B)	----	----	580029	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.576	5073291	5073291	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.576	5073291	7829657	26	3.5506	ng/mL	----
PFOA	Auto	4.559	24688	5073291	9	0.0042	ng/mL	----
PFOS_1	Auto	4.720	567	661155	13	0.0063	ng/mL	----
PFOS-13C_IS	Auto	4.731	661155	661155	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.731	661155	7829657	26	3.9666	ng/mL	----
PFNA-13C_IS	Auto	4.747	5688248	5688248	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.747	5688248	7829657	26	3.5494	ng/mL	----
PFNA	Auto	4.718	11548	5688248	11	-0.0020	ng/mL	----
PFDA-13C_IS	Auto	4.928	5157868	5157868	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.928	5157868	7829657	26	3.4117	ng/mL	----
PFDA	M	4.902	12999	5157868	12	0.0154	ng/mL	----
8_2-FTS-13C_IS	Auto	4.926	732148	732148	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.926	732148	7829657	26	3.8980	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	732148	15	----	ng/mL	----
PFUnA	M	5.105	25458	4806886	14	-0.0059	ng/mL	----
PFUnA-13C_IS	Auto	5.108	4806886	4806886	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.108	4806886	7829657	26	3.5337	ng/mL	----
PFDoA	Auto	5.278	13837	6135492	17	0.0086	ng/mL	----
PFDoA-13C	Auto	5.286	6135492	7829657	26	3.0966	ng/mL	----
PFDoA-13C_IS	Auto	5.286	6135492	6135492	17	5.0000	ng/mL	----
PFTrDA	Auto	5.450	12122	4735082	22	0.0002	ng/mL	----
PFTeDA	Auto	5.603	47059	4735082	22	0.0044	ng/mL	----
PFTeDA-13C	Auto	5.603	4735082	7829657	26	3.2276	ng/mL	----
PFTeDA-13C_IS	Auto	5.603	4735082	4735082	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.249	1500232	1500232	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.249	1500232	7829657	26	2.9479	ng/mL	----
FOSA	M	5.248	1805	1500232	18	0.0046	ng/mL	----
N-MeFOSAA	Auto	5.050	414	795938	19	0.0042	ng/mL	----
N-MeFOSAA-d3	Auto	5.033	795938	7829657	26	2.1432	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.033	795938	795938	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.157	211	855317	21	0.0021	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.129	855317	855317	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.129	855317	7829657	26	2.3086	ng/mL	----
13C7-PFUnDA_IS	Auto	5.108	7829657	7829657	26	5.0000	ng/mL	----

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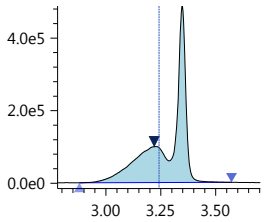
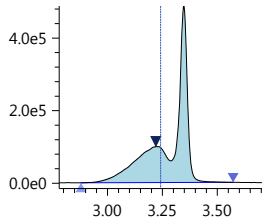
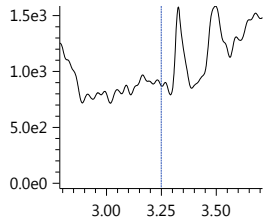
PFBA-13C_IS
Conc 5.0000
RT 3.220 Area 2305885
ISTD 216.90>172.15 (-) 4.89e5



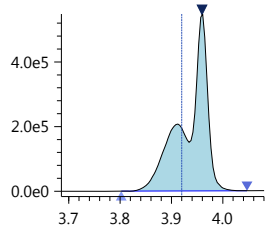
PFBA-13C
Conc 3.3071
RT 3.220 Area 2305885
Q 216.90>172.15 (-) 4.89e5



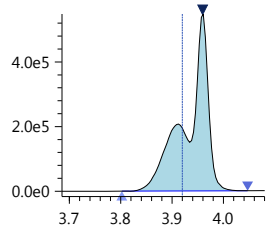
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.59e3



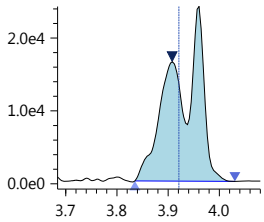
PFPeA-13C_IS
Conc 5.0000
RT 3.959 Area 1590629
ISTD 267.90>223.00 (-) 5.48e5



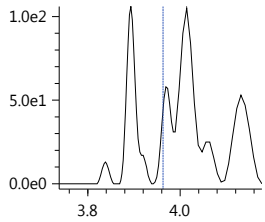
PFPeA-13C
Conc 3.5193
RT 3.959 Area 1590629
Q 267.90>223.00 (-) 5.48e5



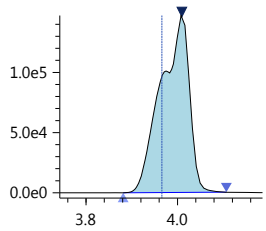
PFPeA
Conc 0.0004
RT 3.908 Area 92693
Q 263.05>219.10 (-) 2.43e4



PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 1.06e2



PFBS-13C
Conc 3.1292
RT 4.009 Area 639108
Q 301.80>80.00 (-) 1.47e5



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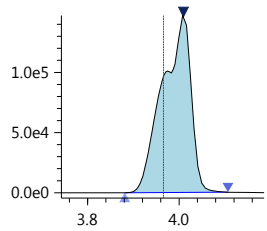
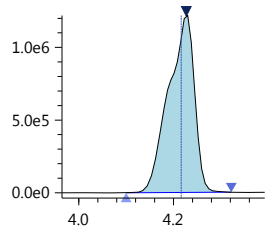
Conc 5.0000
RT 4.009 Area 639108
ISTD 301.80>80.00 (-) 1.47e5



PFHxA-13C_IS
Conc 5.0000
RT 4.227 Area 4639691
ISTD 314.90>270.10 (-) 1.22e6



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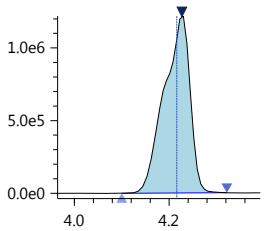
Conc 3.3288
RT 4.227 Area 4639691
Q 314.90>270.10 (-) 1.22e6



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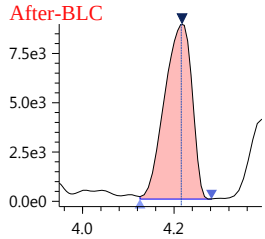
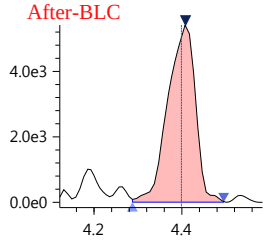
Conc 0.0095
RT 4.218 Area 36968
Q 313.00>269.00 (-) 8.99e3



PFHpA
Conc -0.0113
RT 4.408 Area 23638
Q 362.90>319.00 (-) 5.42e3



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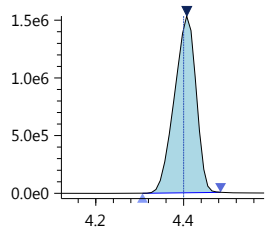
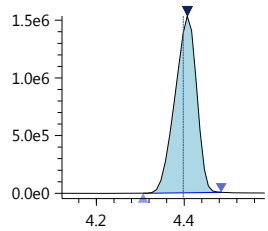
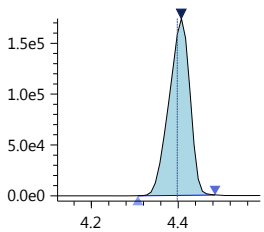
Conc 5.0000
RT 4.408 Area 5260715
ISTD 366.90>322.10 (-) 1.54e6



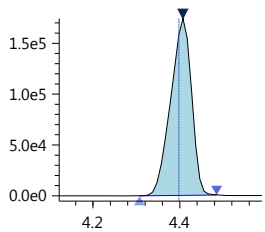
PFHpA-13C
Conc 3.6698
RT 4.408 Area 5260715
Q 366.90>322.10 (-) 1.54e6



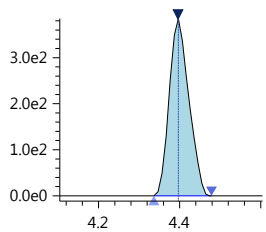
PFHxS-18O_IS
Conc 5.0000
RT 4.407 Area 580029
ISTD 402.70>84.05 (-) 1.74e5



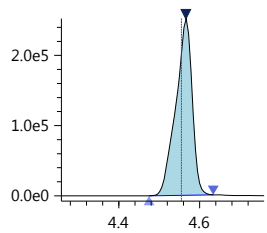
PFHxS-18O
Conc 4.1287
RT 4.407 Area 580029
Q 402.70>84.05 (-) 1.74e5



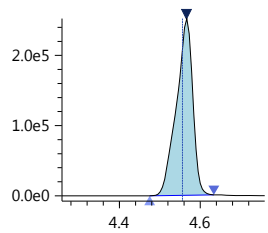
PFHxS_1
Conc 0.0102
RT 4.396 Area 1293
Q 399.00>80.00 (-) 3.85e2



6_2-FTS-13C
Conc 4.3854
RT 4.566 Area 705985
Q 428.90>409.00 (-) 2.52e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.566 Area 705985
ISTD 428.90>409.00 (-) 2.52e5



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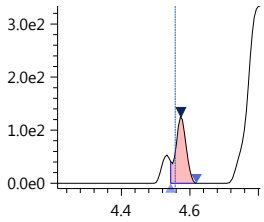
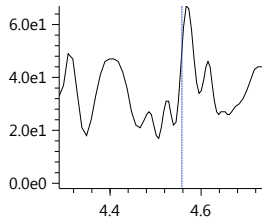
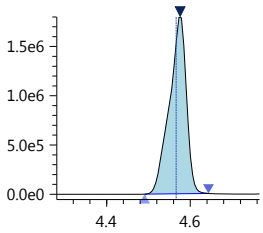
6_2-FTS_1
Conc 0.0018
RT 4.574 Area 266
Q 427.00>407.00 (-) 3.34e2
After-BLC



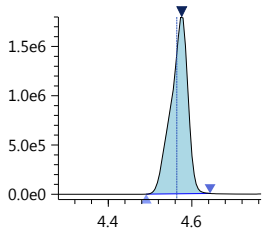
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 6.70e1



PFOA-13C_IS
Conc 5.0000
RT 4.576 Area 5073291
ISTD 416.80>372.05 (-) 1.80e6



PFOA-13C
Conc 3.5506
RT 4.576 Area 5073291
Q 416.80>372.05 (-) 1.80e6



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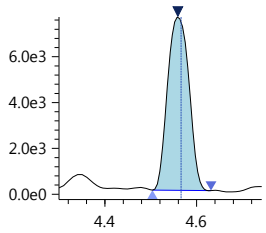
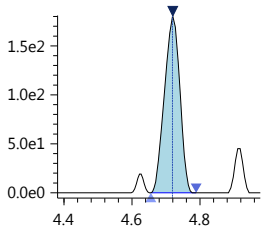
Conc 0.0042
RT 4.559 Area 24688
Q 413.00>369.00 (-) 7.74e3



PFOS_1
Conc 0.0063
RT 4.720 Area 567
Q 499.00>80.00 (-) 1.81e2



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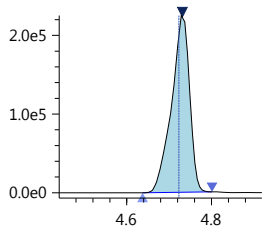
Conc 5.0000
RT 4.731 Area 661155
ISTD 502.80>80.05 (-) 2.25e5



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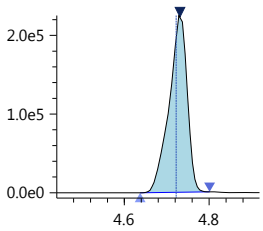
Conc 3.9666
RT 4.731 Area 661155
Q 502.80>80.05 (-) 2.25e5



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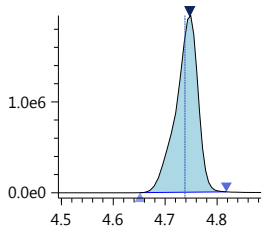
Conc 5.0000
RT 4.747 Area 5688248
ISTD 467.80>423.00 (-) 1.95e6



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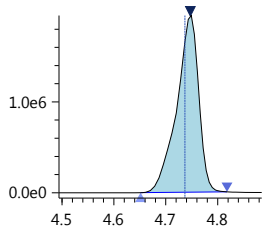
RT 4.747 Area 5688248
Q 467.80>423.00 (-) 1.95e6



PFNA
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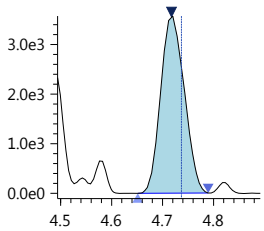
RT 4.718 Area 11548
Q 463.00>418.90 (-) 3.57e3



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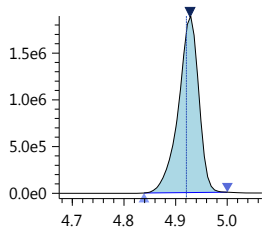
ISTD 514.80>469.95 (-) 1.90e6



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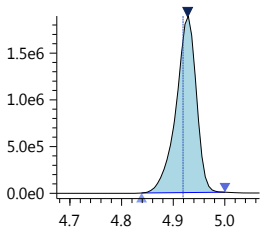
RT 4.928 Area 5157868
Q 514.80>469.95 (-) 1.90e6



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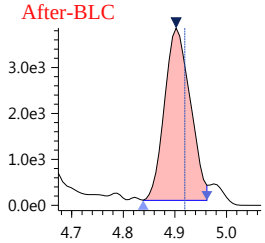
Conc 0.0154
RT 4.902 Area 12999
Q 513.00>468.80 (-) 3.86e3
After-BLC



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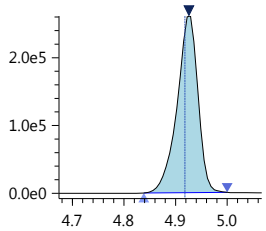
Conc 5.0000
RT 4.926 Area 732148
ISTD 528.80>509.00 (-) 2.62e5



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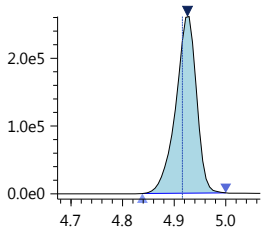
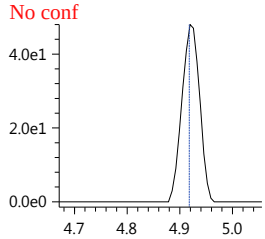
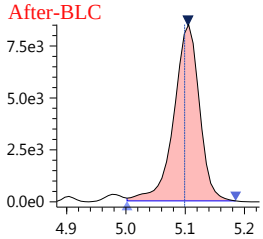
RT 4.926 Area 732148
Q 528.80>509.00 (-) 2.62e5



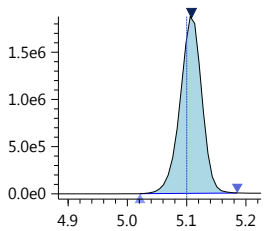
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 4.80e1
No conf



PFUnA
Conc -0.0059
RT 5.105 Area 25458
Q 563.00>518.90 (-) 8.53e3
After-BLC



PFUnA-13C_IS
Conc 5.0000
RT 5.108 Area 4806886
ISTD 564.80>519.95 (-) 1.88e6



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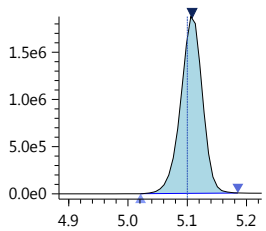
RT 5.108 Area 4806886
Q 564.80>519.95 (-) 1.88e6



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Printed at 3/21/2019 9:48:23 AM

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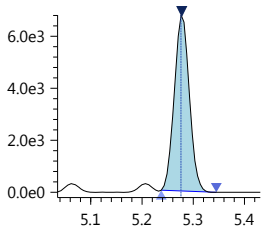
Conc 0.0086
RT 5.278 Area 13837
Q 613.05>569.00 (-) 6.82e3



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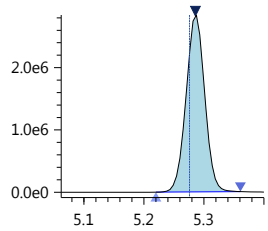
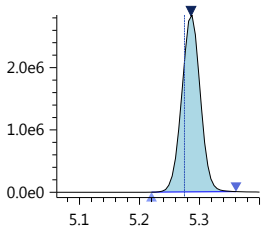
Conc 3.0966
RT 5.286 Area 6135492
Q 614.80>569.95 (-) 2.85e6



PFDoA-13C_IS
Conc 5.0000
RT 5.286 Area 6135492
ISTD 614.80>569.95 (-) 2.85e6



PFTrDA
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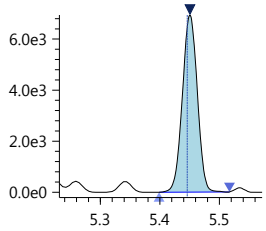
RT 5.450 Area 12122
Q 663.00>618.90 (-) 6.94e3



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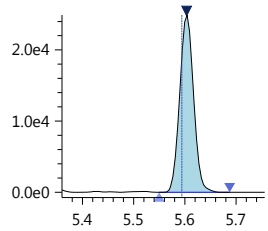
Conc 0.0044
RT 5.603 Area 47059
Q 713.40>669.00 (-) 2.49e4



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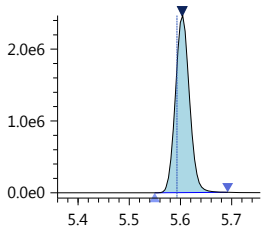
Q 714.70>669.90 (-) 2.47e6



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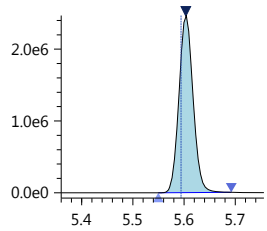

FOSA-13C_IS
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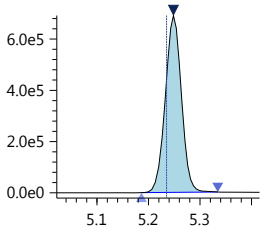
RT 5.249 Area 1500232
ISTD 506.00>78.05 (-) 6.92e5



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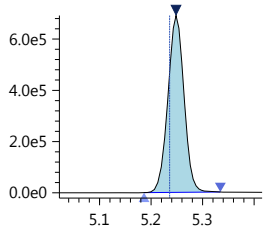

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Conc 0.0046
RT 5.248 Area 1805
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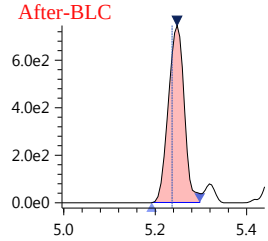
After-BLC



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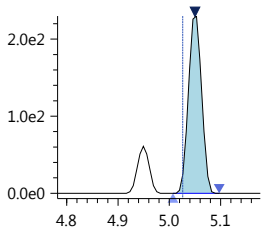
Conc 0.0042
RT 5.050 Area 414
Q 570.20>419.00 (-) 2.30e2



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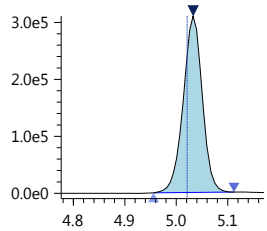
Conc 2.1432
RT 5.033 Area 795938
Q 572.80>419.05 (-) 3.11e5



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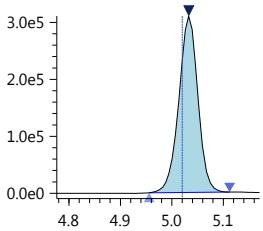

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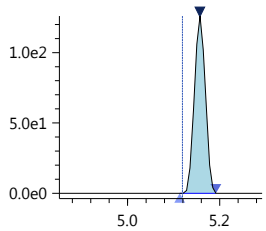
Conc 0.0021
RT 5.157 Area 211
Q 584.20>418.95 (-) 1.26e2



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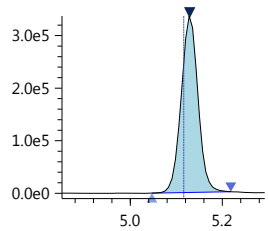
Conc 5.0000
RT 5.129 Area 855317
ISTD 588.80>419.00 (-) 3.37e5



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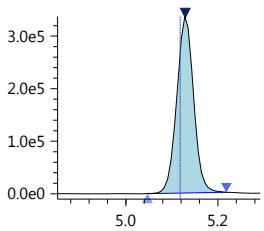
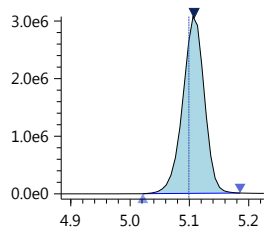
Q 588.80>419.00 (-) 3.37e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.108 Area 7829657
ISTD 570.00>525.00 (-) 3.08e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_029

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Date acquired: 3/19/2019 2:50:36 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_029.lcd
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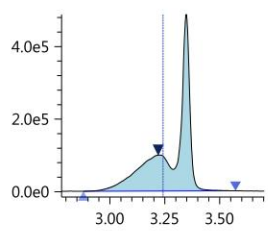
PFBA-13C_IS
Conc 5.0000
RT 3.220 Area 2305885
ISTD 216.90>172.15 (-) 4.89e5



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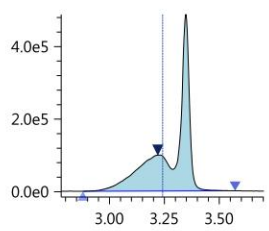
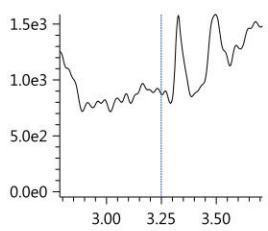
Q 216.90>172.15 (-) 4.89e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.59e3



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RT 3.959 Area 1590629
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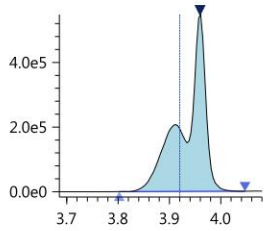

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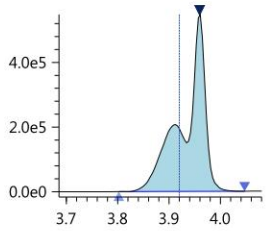
Q 267.90>223.00 (-) 5.48e5



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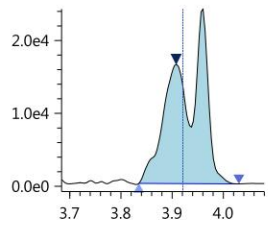
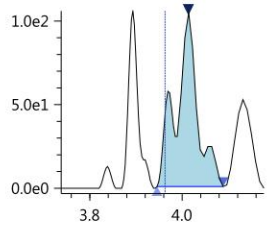
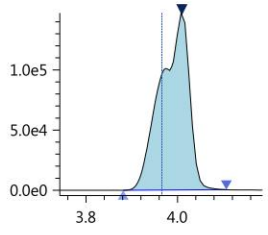
RT 3.908 Area 92693
Q 263.05>219.10 (-) 2.43e4



PFBS_1
Conc 0.0025
RT 4.013 Area 337
Q 299.00>80.00 (-) 1.06e2



PFBS-13C
Conc 3.1292
RT 4.009 Area 639108
Q 301.80>80.00 (-) 1.47e5



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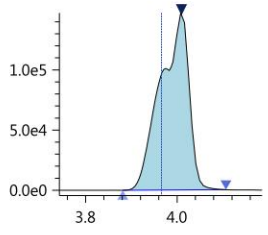

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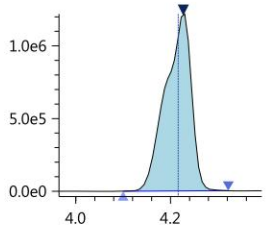
Conc 5.0000
RT 4.227 Area 4639691
ISTD 314.90>270.10 (-) 1.22e6



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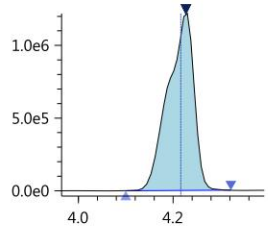
Q 314.90>270.10 (-) 1.22e6



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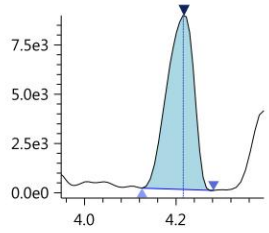
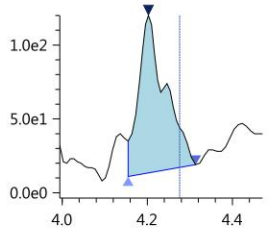
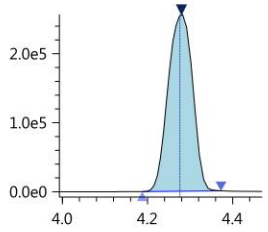
Conc 0.0088
RT 4.218 Area 36340
Q 313.00>269.00 (-) 8.99e3



HPFO_DA
Conc 0.0021
RT 4.203 Area 468
Q 329.00>169.00 (-) 1.20e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.280 Area 1032760
ISTD 332.00>286.80 (-) 2.57e5



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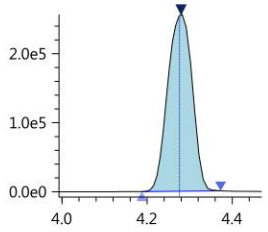
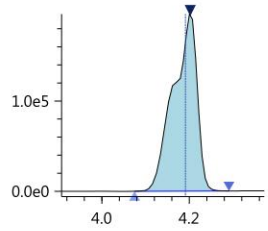


4_2-FTS-13C_IS
Conc 5.0000
RT 4.202 Area 742714
ISTD 328.80>309.05 (-) 1.96e5



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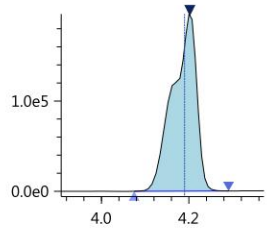
RT 4.202 Area 742714
Q 328.80>309.05 (-) 1.96e5



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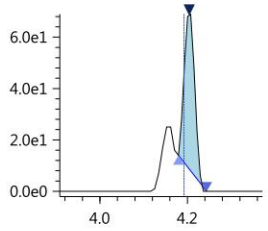
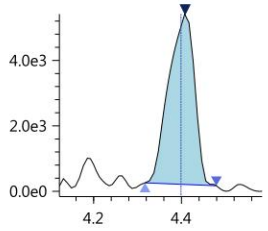
RT 4.204 Area 100
Q 327.00>307.05 (-) 6.90e1



PFHpA
Conc -0.0142
RT 4.408 Area 21225
Q 362.90>319.00 (-) 5.42e3



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Conc 5.0000
RT 4.408 Area 5260715
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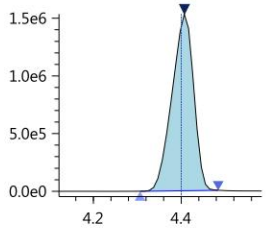

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PFHpA-13C
Conc 3.6698
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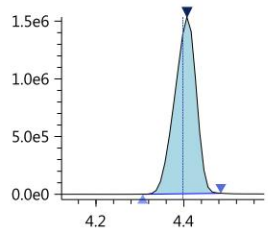
Q 366.90>322.10 (-) 1.54e6



PFHxS-18O_IS
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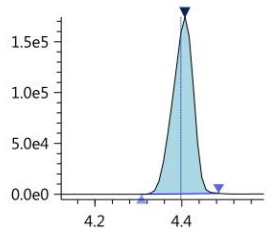
RT 4.407 Area 580029
ISTD 402.70>84.05 (-) 1.74e5



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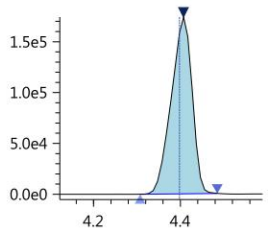
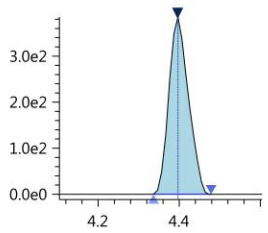
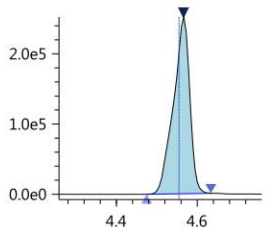


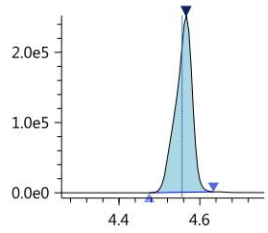
PFHxS_1
Conc 0.0102
RT 4.396 Area 1293
Q 399.00>80.00 (-) 3.85e2



6_2-FTS-13C
Conc 4.3854
RT 4.566 Area 705985
Q 428.90>409.00 (-) 2.52e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.566 Area 705985
ISTD 428.90>409.00 (-) 2.52e5



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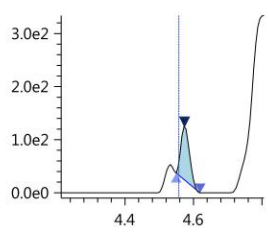
Conc 0.0012
RT 4.574 Area 176
Q 427.00>407.00 (-) 3.34e2



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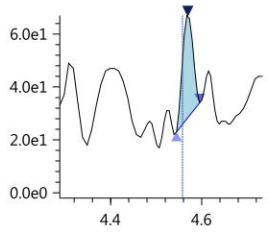
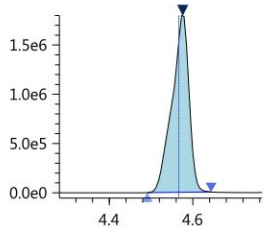
Conc 0.0004
RT 4.570 Area 63
Q 449.00>80.15 (-) 6.70e1



PFOA-13C_IS
Conc 5.0000
RT 4.576 Area 5073291
ISTD 416.80>372.05 (-) 1.80e6



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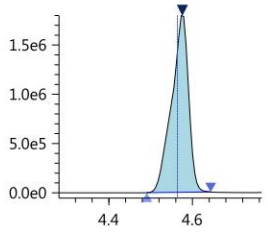
RT 4.576 Area 5073291
Q 416.80>372.05 (-) 1.80e6



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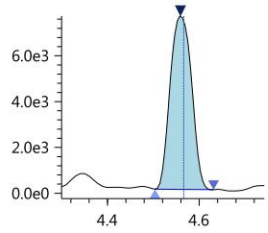
Conc 0.0042
RT 4.559 Area 24688
Q 413.00>369.00 (-) 7.74e3



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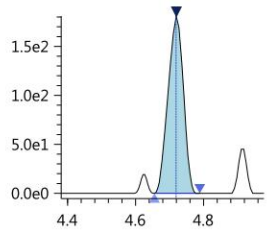
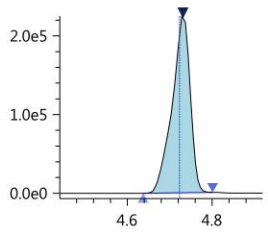
Conc 0.0063
RT 4.720 Area 567
Q 499.00>80.00 (-) 1.81e2



PFOS-13C_IS
Conc 5.0000
RT 4.731 Area 661155
ISTD 502.80>80.05 (-) 2.25e5



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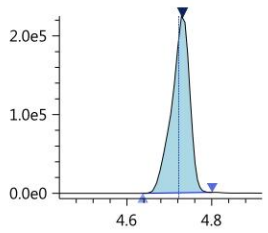
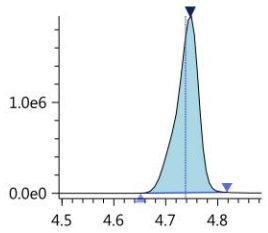
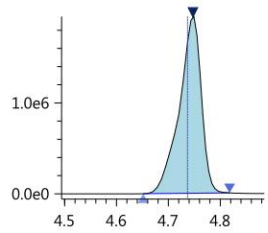
Conc 3.9666
RT 4.731 Area 661155
Q 502.80>80.05 (-) 2.25e5



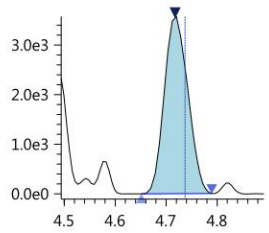
PFNA-13C_IS
Conc 5.0000
RT 4.747 Area 5688248
ISTD 467.80>423.00 (-) 1.95e6



PFNA-13C
Conc 3.5494
RT 4.747 Area 5688248
Q 467.80>423.00 (-) 1.95e6



PFNA
Conc -0.0020
RT 4.718 Area 11548
Q 463.00>418.90 (-) 3.57e3



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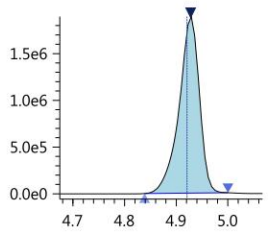
RT 4.928 Area 5157868
ISTD 514.80>469.95 (-) 1.90e6



PFDA-13C
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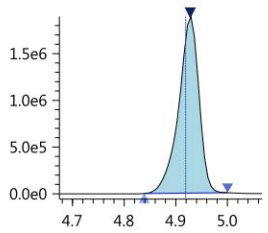

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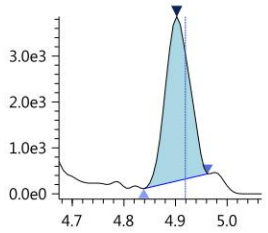
Conc 0.0140
RT 4.902 Area 11780
Q 513.00>468.80 (-) 3.86e3



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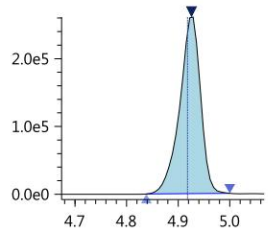
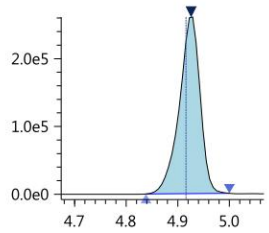
8_2-FTS-13C_IS
Conc 5.0000
RT 4.926 Area 732148
ISTD 528.80>509.00 (-) 2.62e5



8_2-FTS-13C
Conc 3.8980
RT 4.926 Area 732148
Q 528.80>509.00 (-) 2.62e5



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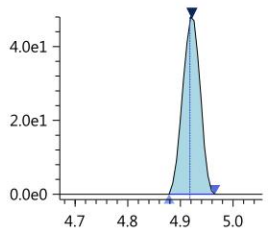
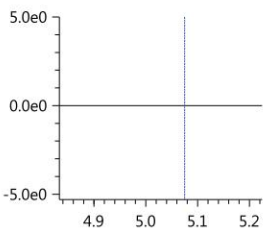
RT 4.922 Area 112
Q 527.10>506.90 (-) 4.80e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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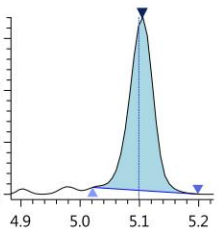
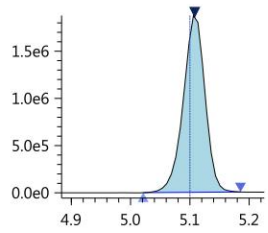
Conc -0.0081
RT 5.105 Area 23852
Q 563.00>518.90 (-) 8.53e3



PFUnA-13C_IS
Conc 5.0000
RT 5.108 Area 4806886
ISTD 564.80>519.95 (-) 1.88e6



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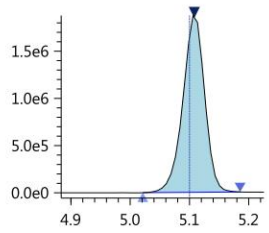
Conc 3.5337
RT 5.108 Area 4806886
Q 564.80>519.95 (-) 1.88e6



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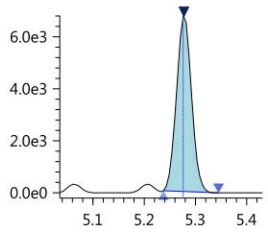
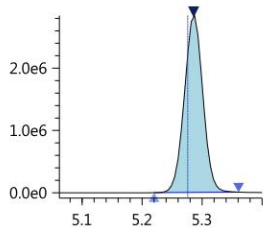
Conc 0.0086
RT 5.278 Area 13837
Q 613.05>569.00 (-) 6.82e3



PFDoA-13C
Conc 3.0966
RT 5.286 Area 6135492
Q 614.80>569.95 (-) 2.85e6



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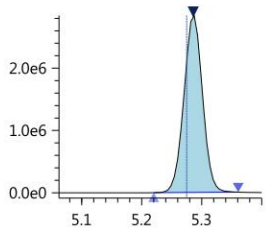
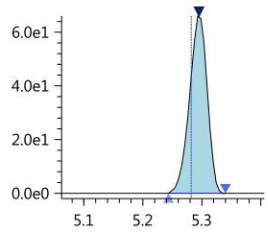
Conc 5.0000
RT 5.286 Area 6135492
ISTD 614.80>569.95 (-) 2.85e6



10_2-FtS_1
Conc 0.0008
RT 5.295 Area 139
Q 627.00>606.95 (-) 6.60e1



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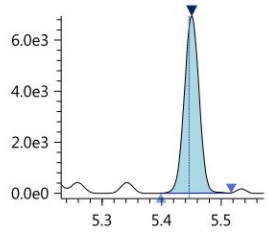
Conc 0.0002
RT 5.450 Area 12122
Q 663.00>618.90 (-) 6.94e3



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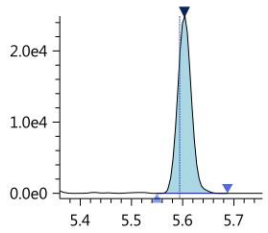
Conc 0.0044
RT 5.603 Area 47059
Q 713.40>669.00 (-) 2.49e4



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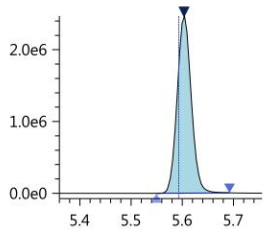
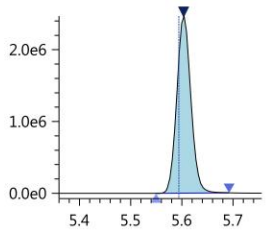
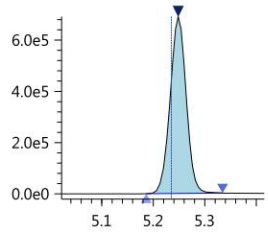
Conc 3.2276
RT 5.603 Area 4735082
Q 714.70>669.90 (-) 2.47e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.603 Area 4735082
ISTD 714.70>669.90 (-) 2.47e6



FOSA-13C_IS
Conc 5.0000
RT 5.249 Area 1500232
ISTD 506.00>78.05 (-) 6.92e5



FOSA-13C
Conc 2.9479
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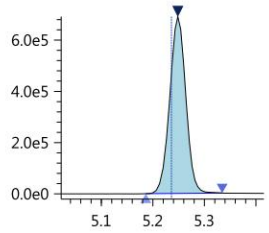
Q 506.00>78.05 (-) 6.92e5



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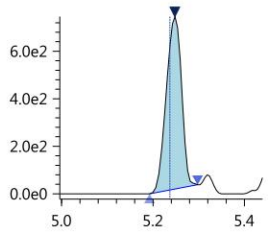
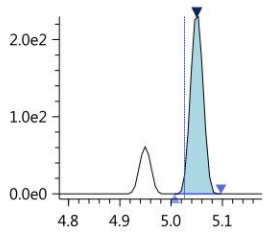
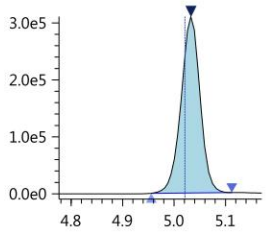
Conc 0.0043
RT 5.248 Area 1692
Q 498.20>78.00 (-) 7.46e2



N-MeFOSAA
Conc 0.0042
RT 5.050 Area 414
Q 570.20>419.00 (-) 2.30e2



N-MeFOSAA-d3
Conc 2.1432
RT 5.033 Area 795938
Q 572.80>419.05 (-) 3.11e5



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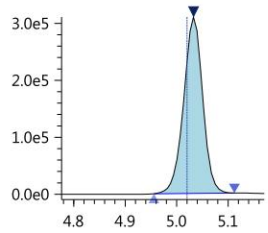
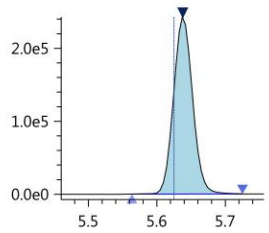
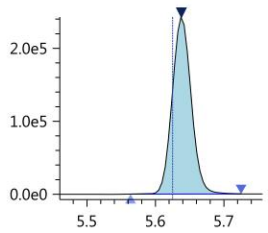
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.033 Area 795938
ISTD 572.80>419.05 (-) 3.11e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.638 Area 471042
ISTD 514.90>168.90 (-) 2.43e5



N-MeFOSA-d3
Conc 2.5470
RT 5.638 Area 471042
Q 514.90>168.90 (-) 2.43e5



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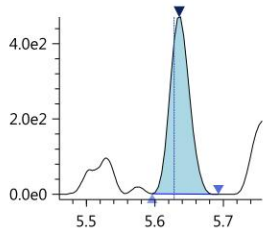
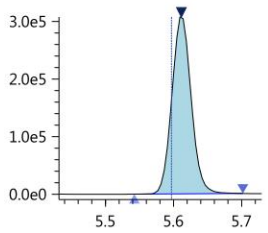
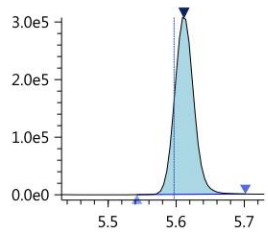
RT 5.635 Area 955
Q 512.00>169.10 (-) 4.71e2



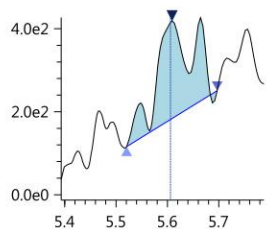
N-MeFOSE-d7
Conc 3.1145
RT 5.611 Area 609101
Q 622.70>59.10 (-) 3.08e5



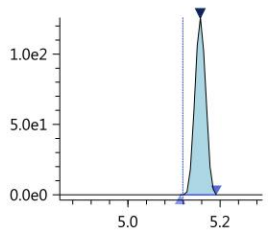
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.611 Area 609101
ISTD 622.70>59.10 (-) 3.08e5



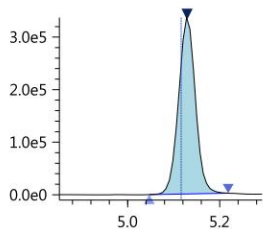
N-MeFOSE
Conc 0.0073
RT 5.609 Area 1146
Q 616.00>59.00 (-) 4.27e2



N-EtFOSAA
Conc 0.0021
RT 5.157 Area 211
Q 584.20>418.95 (-) 1.26e2



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.129 Area 855317
ISTD 588.80>419.00 (-) 3.37e5



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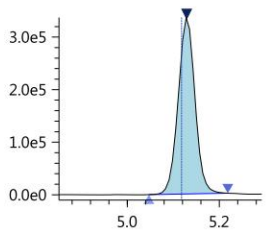
Q 588.80>419.00 (-) 3.37e5



N-EtFOSA-d9_IS
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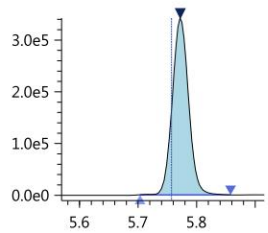
RT 5.772 Area 661091
ISTD 530.90>169.15 (-) 3.43e5



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Conc 2.5817
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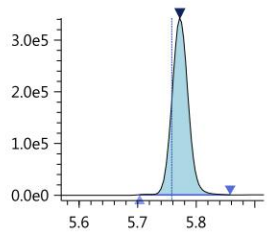
Q 530.90>169.15 (-) 3.43e5



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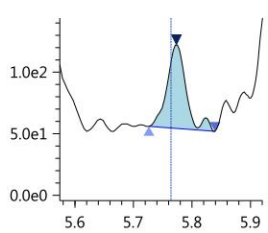
RT 5.773 Area 152
Q 526.90>169.10 (-) 1.44e2



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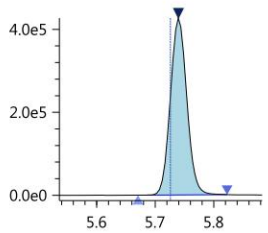
RT 5.740 Area 834070
ISTD 638.70>59.10 (-) 4.27e5



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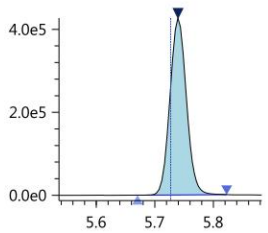
Q 638.70>59.10 (-) 4.27e5



N-EtFOSE
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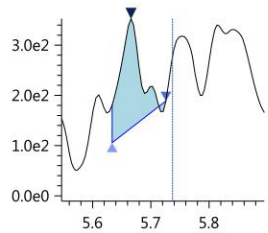
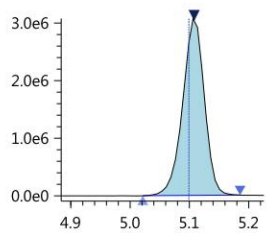
Q 630.00>58.90 (-) 3.53e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.108 Area 7829657
ISTD 570.00>525.00 (-) 3.08e6



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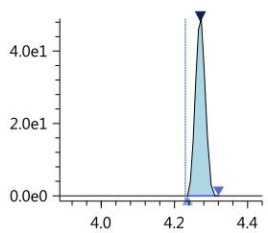
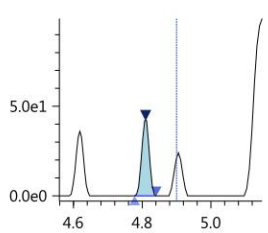
Conc 0.0012
RT 4.271 Area 95
Q 349.00>99.00 (-) 4.90e1



PFNS
Conc 0.0007
RT 4.810 Area 65
Q 549.00>99.00 (-) 9.90e1



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_015
Lab ID: KQ1903443-04
RunType: MB
Matrix: Ground Water

Date Acquired: 3/19/19 12:24
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_015	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:24	**Vial:**	25
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1903443-04	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	KQ1903443
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.098	-0.02	7896984	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.002	-0.01	629299	3.0549	61	20 - 109	Y
18O2-PFHxS	4.398	-0.01	559593	3.9492	79	26 - 122	Y
13C4-PFOS	4.721	-0.01	609630	3.6263	73	25 - 121	Y
13C4-PFBA	3.216	-0.14	2357126	3.3518	67	27 - 124	Y
13C5-PFPeA	3.951	-0.01	1708330	3.7474	75	27 - 138	Y
13C2-PFHxA	4.218	-0.01	5102386	3.6296	73	28 - 132	Y
13C4-PFHpA	4.398	-0.01	5708273	3.9481	79	19 - 139	Y
13C4-PFOA	4.566	-0.01	5213651	3.6177	72	22 - 130	Y
13C5-PFNA	4.737	-0.01	6210580	3.8423	77	20 - 127	Y
13C2-PFDA	4.918	-0.01	5470104	3.5874	72	24 - 125	Y
13C2-PFUnDA	5.098	-0.02	4694858	3.4220	68	22 - 125	Y
13C2-PFDoDA	5.277	-0.01	6329484	3.1672	63	19 - 122	Y
13C2-PFTeDA	5.594	-0.01	5135496	3.4707	69	13 - 124	Y
13C8-FOSA	5.238	-0.01	1691665	3.2958	66	18 - 109	Y
D3-MeFOSAA	5.023	-0.02	918085	2.4511	49	9 - 123	Y
D5-EtFOSAA	5.119	-0.01	968705	2.5924	52	12 - 126	Y
13C2-6:2 FTS	4.557	-0.01	843764	5.1966	104	10 - 226	Y
13C2-8:2 FTS	4.916	-0.01	850290	4.4885	90	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)	0		0	0	0	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.397	-0.01	928	0.0076	0.24	U	Y

1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_015	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:24	**Vial:**	25
Run Type:	MB	**Dilution:**	1
Lab ID:	KQ1903443-04	**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)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.716	-0.02	555	0.0067	0.21	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.951	-0.01	101612	0.0031	0.099	U	Y
Perfluorohexanoic acid (PFHxA)	4.196	-0.03	41977	0.0110	0.35	U	Y
Perfluoroheptanoic acid (PFHpA)	4.382	-0.03	22516	-0.0148	0	U	Y
Perfluorooctanoic acid (PFOA)	4.542	-0.03	27981	0.0072	0.23	U	Y
Perfluorononanoic acid (PFNA)	4.713	-0.04	13934	-0.0004	0	U	Y
Perfluorodecanoic acid (PFDA)	4.894	-0.04	15521	0.0174	0.56	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.091	-0.02	21309	-0.0108	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.273	-0.02	16096	0.0110	0.35	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.440	-0.02	14256	0.0014	0.045	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.593	-0.01	50167	0.0019	0.061	U	Y
Perfluorooctane sulfonamide (FOSA)	5.235	-0.01	2420	0.0054	0.17	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.068	+0.03	1822	0.0161	0.52	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.560	-0.01	578	0.0032	0.10	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.915	-0.01	194	0.0012	0.038	U	Y

Prep Amount:	250 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: 3/21/19 10:05

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_015

Sample ID: KQ1903443-04
Date acquired: 3/19/2019 12:24:10 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_015.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.216	2357126	2357126	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.216	2357126	7896984	26	3.3518	ng/mL	----
PFBA	ND(W/B)	----	----	2357126	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.951	1708330	1708330	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.951	1708330	7896984	26	3.7474	ng/mL	----
PFPeA	Auto	3.951	101612	1708330	4	0.0031	ng/mL	----
PFBS_1	ND(W/B)	----	----	629299	16	----	ng/mL	----
PFBS-13C	Auto	4.002	629299	7896984	26	3.0549	ng/mL	----
PFBS-13C_IS	Auto	4.002	629299	629299	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.218	5102386	5102386	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.218	5102386	7896984	26	3.6296	ng/mL	----
PFHxA	Auto	4.196	41977	5102386	6	0.0110	ng/mL	----
PFHpA	Auto	4.382	22516	5708273	8	-0.0148	ng/mL	----
PFHpA-13C_IS	Auto	4.398	5708273	5708273	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.398	5708273	7896984	26	3.9481	ng/mL	----
PFHxS-18O_IS	Auto	4.398	559593	559593	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.398	559593	7896984	26	3.9492	ng/mL	----
PFHxS_1	Auto	4.397	928	559593	7	0.0076	ng/mL	----
6_2-FTS-13C	Auto	4.557	843764	7896984	26	5.1966	ng/mL	----
6_2-FTS-13C_IS	Auto	4.557	843764	843764	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.560	578	843764	10	0.0032	ng/mL	----
PFHpS_1	ND(W/B)	----	----	559593	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.566	5213651	5213651	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.566	5213651	7896984	26	3.6177	ng/mL	----
PFOA	Auto	4.542	27981	5213651	9	0.0072	ng/mL	----
PFOS_1	Auto	4.716	555	609630	13	0.0067	ng/mL	----
PFOS-13C_IS	Auto	4.721	609630	609630	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.721	609630	7896984	26	3.6263	ng/mL	----
PFNA-13C_IS	Auto	4.737	6210580	6210580	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.737	6210580	7896984	26	3.8423	ng/mL	----
PFNA	Auto	4.713	13934	6210580	11	-0.0004	ng/mL	----
PFDA-13C_IS	Auto	4.918	5470104	5470104	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.918	5470104	7896984	26	3.5874	ng/mL	----
PFDA	Auto	4.894	15521	5470104	12	0.0174	ng/mL	----
8_2-FTS-13C_IS	Auto	4.916	850290	850290	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.916	850290	7896984	26	4.4885	ng/mL	----
8_2-FTS_1	Auto	4.915	194	850290	15	0.0012	ng/mL	----
PFUnA	Auto	5.091	21309	4694858	14	-0.0108	ng/mL	----
PFUnA-13C_IS	Auto	5.098	4694858	4694858	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.098	4694858	7896984	26	3.4220	ng/mL	----
PFDoA	M	5.273	16096	6329484	17	0.0110	ng/mL	----
PFDoA-13C	Auto	5.277	6329484	7896984	26	3.1672	ng/mL	----
PFDoA-13C_IS	Auto	5.277	6329484	6329484	17	5.0000	ng/mL	----
PFTrDA	Auto	5.440	14256	5135496	22	0.0014	ng/mL	----
PFTeDA	Auto	5.593	50167	5135496	22	0.0019	ng/mL	----
PFTeDA-13C	Auto	5.594	5135496	7896984	26	3.4707	ng/mL	----
PFTeDA-13C_IS	Auto	5.594	5135496	5135496	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.238	1691665	1691665	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.238	1691665	7896984	26	3.2958	ng/mL	----
FOSA	M	5.235	2420	1691665	18	0.0054	ng/mL	----
N-MeFOSAA	Auto	5.068	1822	918085	19	0.0161	ng/mL	----
N-MeFOSAA-d3	Auto	5.023	918085	7896984	26	2.4511	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.023	918085	918085	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	968705	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.119	968705	968705	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.119	968705	7896984	26	2.5924	ng/mL	----
13C7-PFUnDA_IS	Auto	5.098	7896984	7896984	26	5.0000	ng/mL	----

Insight Report

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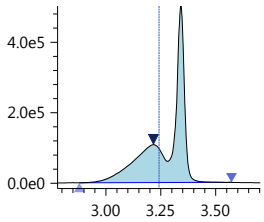
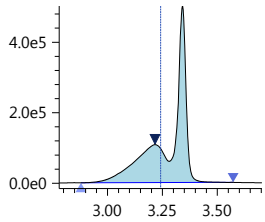
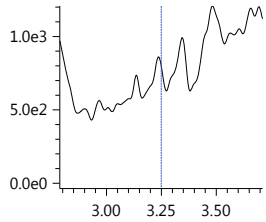
PFBA-13C_IS
Conc 5.0000
RT 3.216 Area 2357126
ISTD 216.90>172.15 (-) 5.03e5



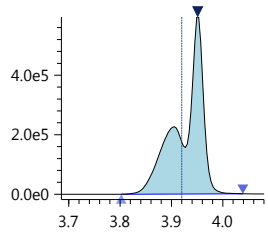
PFBA-13C
Conc 3.3518
RT 3.216 Area 2357126
Q 216.90>172.15 (-) 5.03e5



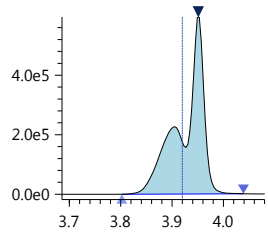
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.21e3



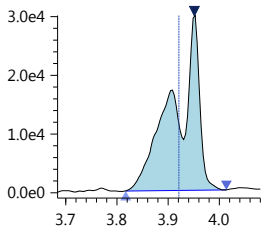
PFPeA-13C_IS
Conc 5.0000
RT 3.951 Area 1708330
ISTD 267.90>223.00 (-) 5.96e5



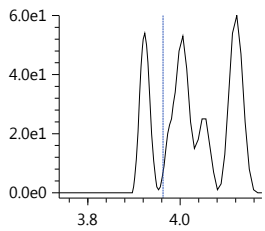
PFPeA-13C
Conc 3.7474
RT 3.951 Area 1708330
Q 267.90>223.00 (-) 5.96e5



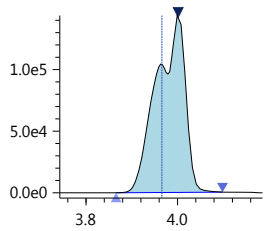
PFPeA
Conc 0.0031
RT 3.951 Area 101612
Q 263.05>219.10 (-) 3.02e4



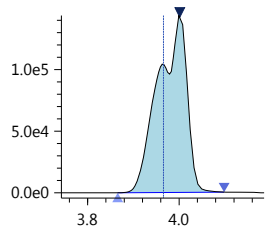
PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 6.00e1



PFBS-13C
Conc 3.0549
RT 4.002 Area 629299
Q 301.80>80.00 (-) 1.44e5



PFBS-13C_IS
Conc 5.0000
RT 4.002 Area 629299
ISTD 301.80>80.00 (-) 1.44e5



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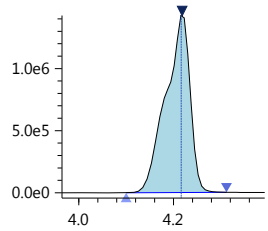
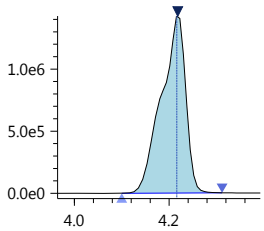
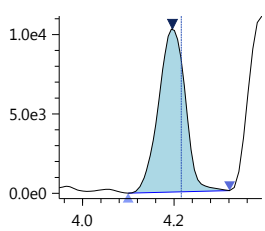
Conc 5.0000
RT 4.218 Area 5102386
ISTD 314.90>270.10 (-) 1.43e6



PFHxA-13C
Conc 3.6296
RT 4.218 Area 5102386
Q 314.90>270.10 (-) 1.43e6



PFHxA
Conc 0.0110
RT 4.196 Area 41977
Q 313.00>269.00 (-) 1.12e4



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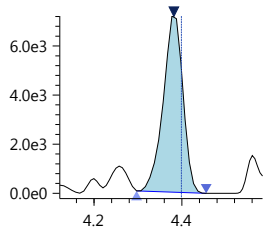
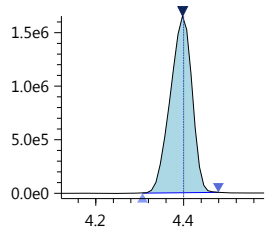
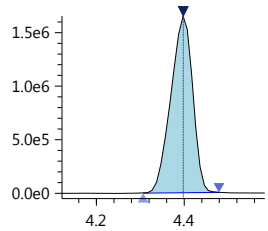
Conc -0.0148
RT 4.382 Area 22516
Q 362.90>319.00 (-) 7.22e3



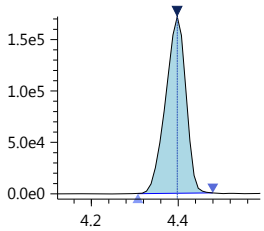
PFHpA-13C_IS
Conc 5.0000
RT 4.398 Area 5708273
ISTD 366.90>322.10 (-) 1.65e6



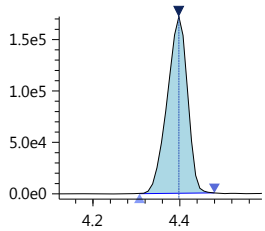
PFHpA-13C
Conc 3.9481
RT 4.398 Area 5708273
Q 366.90>322.10 (-) 1.65e6



PFHxS-18O_IS
Conc 5.0000
RT 4.398 Area 559593
ISTD 402.70>84.05 (-) 1.72e5



PFHxS-18O
Conc 3.9492
RT 4.398 Area 559593
Q 402.70>84.05 (-) 1.72e5



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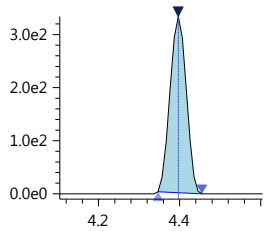
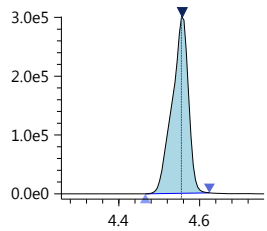
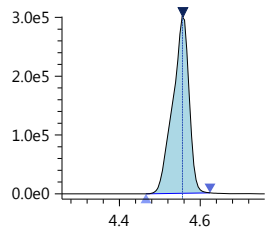
Conc 0.0076
RT 4.397 Area 928
Q 399.00>80.00 (-) 3.34e2



6_2-FTS-13C
Conc 5.1966
RT 4.557 Area 843764
Q 428.90>409.00 (-) 3.01e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.557 Area 843764
ISTD 428.90>409.00 (-) 3.01e5



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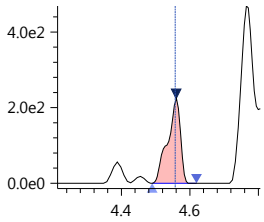
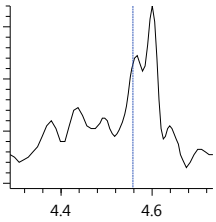
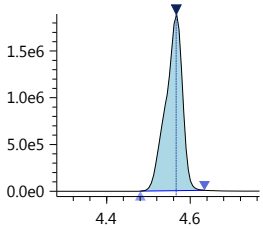
6_2-FTS_1
Conc 0.0032
RT 4.560 Area 578
Q 427.00>407.00 (-) 4.69e2
After-WP



PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 6.80e1



PFOA-13C_IS
Conc 5.0000
RT 4.566 Area 5213651
ISTD 416.80>372.05 (-) 1.90e6



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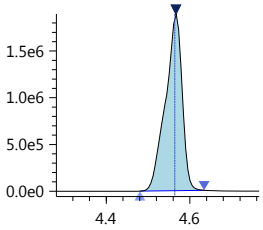
Conc 3.6177
RT 4.566 Area 5213651
Q 416.80>372.05 (-) 1.90e6



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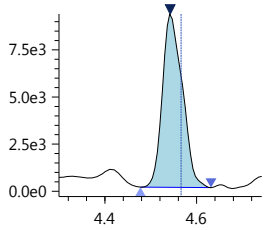
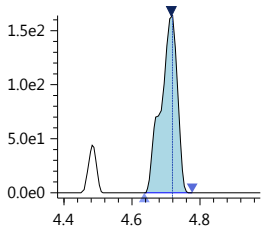
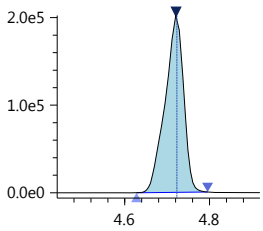
Q 413.00>369.00 (-) 9.41e3



PFOS_1
Conc 0.0067
RT 4.716 Area 555
Q 499.00>80.00 (-) 1.64e2



PFOS-13C_IS
Conc 5.0000
RT 4.721 Area 609630
ISTD 502.80>80.05 (-) 2.02e5



PFOS-13C
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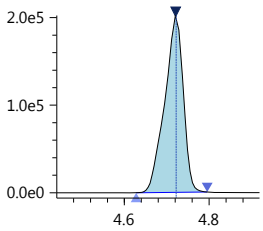
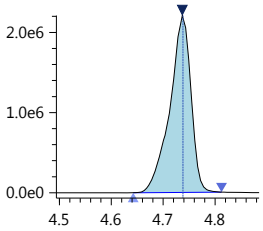
Q 502.80>80.05 (-) 2.02e5



PFNA-13C_IS
Conc 5.0000
RT 4.737 Area 6210580
ISTD 467.80>423.00 (-) 2.21e6



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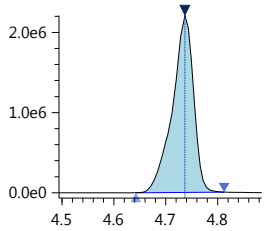
Conc 3.8423
RT 4.737 Area 6210580
Q 467.80>423.00 (-) 2.21e6



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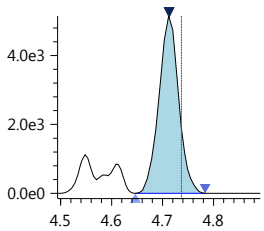
Conc -0.0004
RT 4.713 Area 13934
Q 463.00>418.90 (-) 5.15e3



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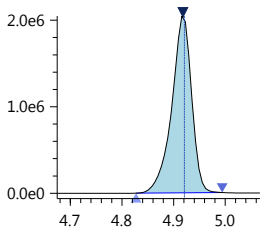
Conc 5.0000
RT 4.918 Area 5470104
ISTD 514.80>469.95 (-) 2.05e6



PFDA-13C
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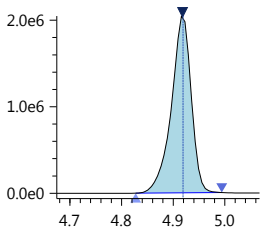
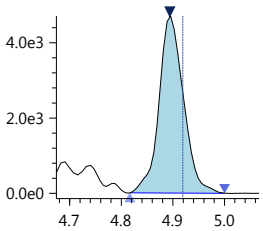
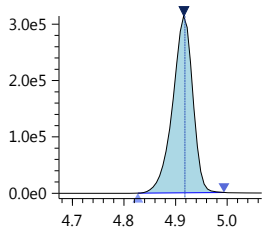
RT 4.918 Area 5470104
Q 514.80>469.95 (-) 2.05e6



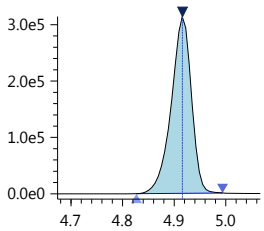
PFDA
Conc 0.0174
RT 4.894 Area 15521
Q 513.00>468.80 (-) 4.71e3



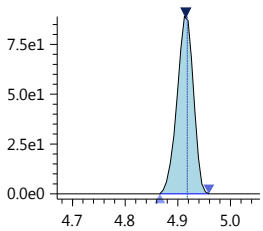
8_2-FTS-13C_IS
Conc 5.0000
RT 4.916 Area 850290
ISTD 528.80>509.00 (-) 3.14e5



8_2-FTS-13C
Conc 4.4885
RT 4.916 Area 850290
Q 528.80>509.00 (-) 3.14e5



8_2-FTS_1
Conc 0.0012
RT 4.915 Area 194
Q 527.10>506.90 (-) 8.90e1



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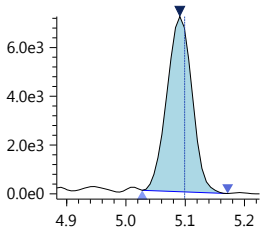
Conc -0.0108
RT 5.091 Area 21309
Q 563.00>518.90 (-) 7.27e3



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Conc 5.0000
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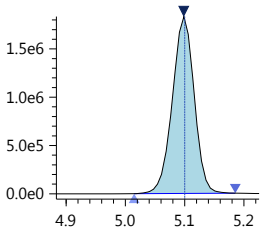
ISTD 564.80>519.95 (-) 1.84e6



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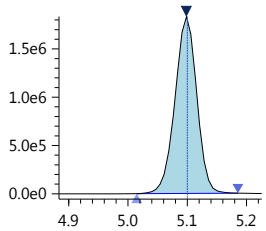
Conc 3.4220
RT 5.098 Area 4694858
Q 564.80>519.95 (-) 1.84e6



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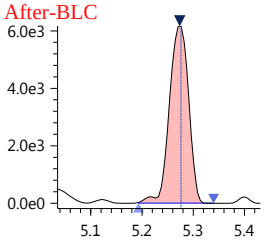
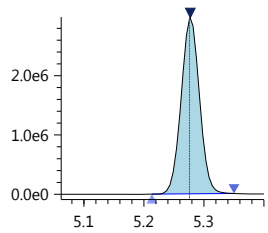
PFDoA
Conc 0.0110
RT 5.273 Area 16096
Q 613.05>569.00 (-) 6.17e3
After-BLC



PFDoA-13C
Conc 3.1672
RT 5.277 Area 6329484
Q 614.80>569.95 (-) 2.99e6



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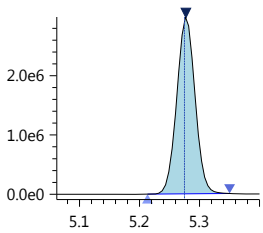
RT 5.277 Area 6329484
ISTD 614.80>569.95 (-) 2.99e6



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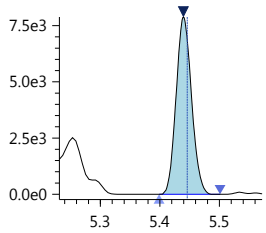
Conc 0.0014
RT 5.440 Area 14256
Q 663.00>618.90 (-) 7.89e3



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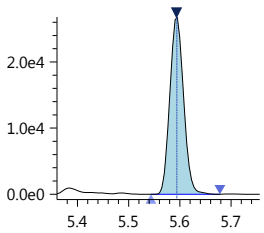
Conc 0.0019
RT 5.593 Area 50167
Q 713.40>669.00 (-) 2.68e4



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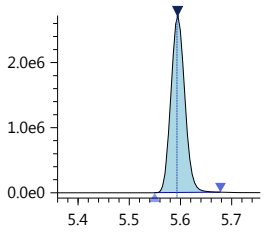
Conc 3.4707
RT 5.594 Area 5135496
Q 714.70>669.90 (-) 2.72e6



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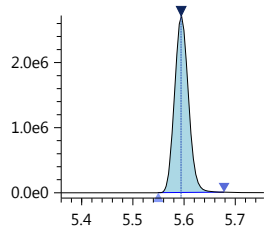
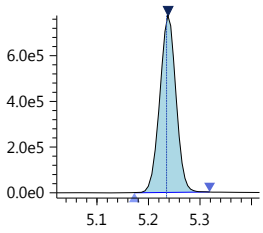
ISTD 714.70>669.90 (-) 2.72e6



FOSA-13C_IS
Conc 5.0000
RT 5.238 Area 1691665
ISTD 506.00>78.05 (-) 7.76e5



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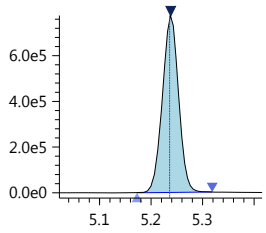
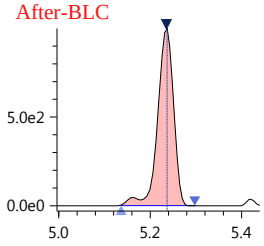
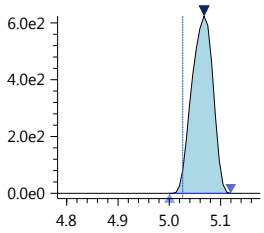
Conc 3.2958
RT 5.238 Area 1691665
Q 506.00>78.05 (-) 7.76e5



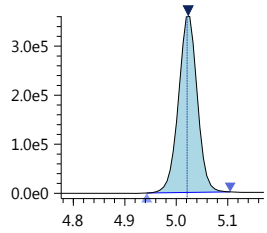
FOSA
Conc 0.0054
RT 5.235 Area 2420
Q 498.20>78.00 (-) 9.99e2
After-BLC



N-MeFOSAA
Conc 0.0161
RT 5.068 Area 1822
Q 570.20>419.00 (-) 6.24e2



N-MeFOSAA-d3
Conc 2.4511
RT 5.023 Area 918085
Q 572.80>419.05 (-) 3.61e5



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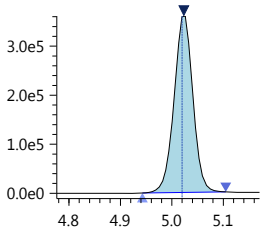
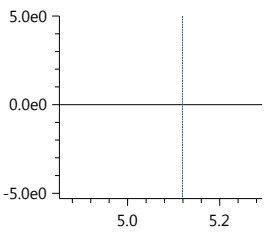
Conc 5.0000
RT 5.023 Area 918085
ISTD 572.80>419.05 (-) 3.61e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.119 Area 968705
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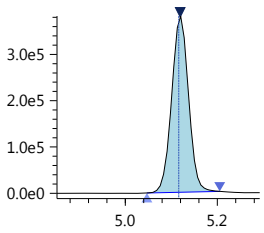

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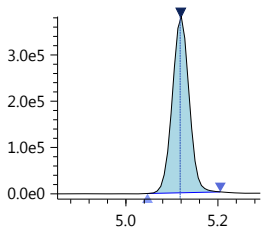
Conc 2.5924
RT 5.119 Area 968705
Q 588.80>419.00 (-) 3.83e5



13C7-PFUnDA_IS
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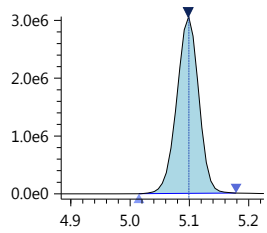

Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_015

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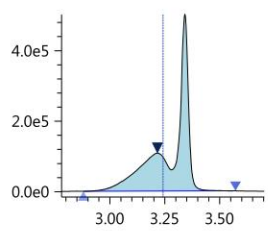
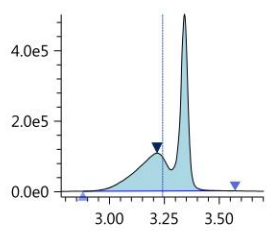
Date acquired: 3/19/2019 12:24:10 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_015.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 2

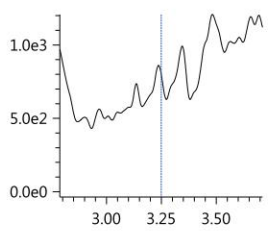
PFBA-13C_IS
Conc 5.0000
RT 3.216 Area 2357126
ISTD 216.90>172.15 (-) 5.03e5



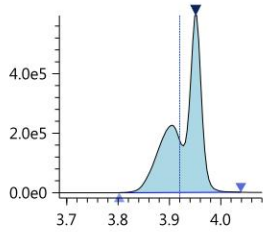
PFBA-13C
Conc 3.3518
RT 3.216 Area 2357126
Q 216.90>172.15 (-) 5.03e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.21e3



PFPeA-13C_IS
Conc 5.0000
RT 3.951 Area 1708330
ISTD 267.90>223.00 (-) 5.96e5



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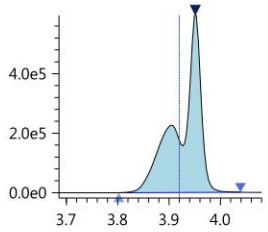
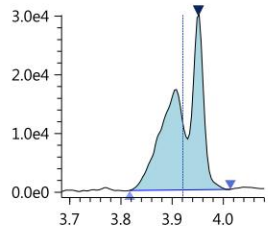
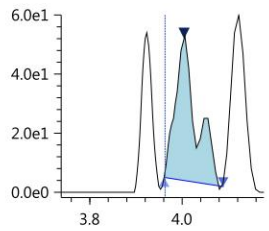
RT 3.951 Area 1708330
Q 267.90>223.00 (-) 5.96e5



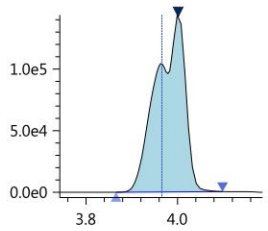
PFPeA
Conc 0.0031
RT 3.951 Area 101612
Q 263.05>219.10 (-) 3.02e4



PFBS_1
Conc 0.0011
RT 4.004 Area 153
Q 299.00>80.00 (-) 6.00e1



PFBS-13C
Conc 3.0549
RT 4.002 Area 629299
Q 301.80>80.00 (-) 1.44e5



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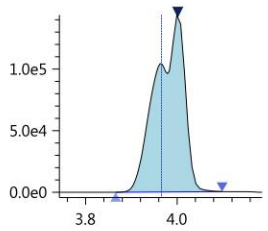

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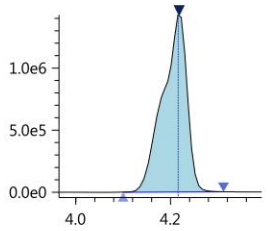
RT 4.218 Area 5102386
ISTD 314.90>270.10 (-) 1.43e6



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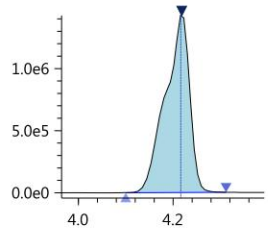
Conc 3.6296
RT 4.218 Area 5102386
Q 314.90>270.10 (-) 1.43e6



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Conc 0.0110
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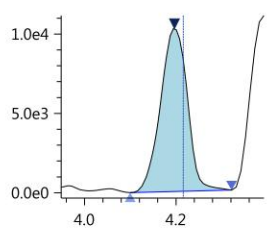
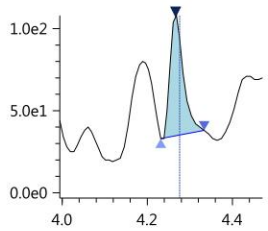
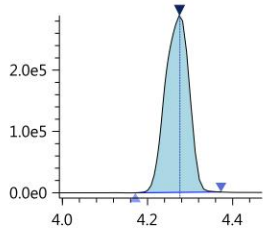
Q 313.00>269.00 (-) 1.12e4



HPFO_DA
Conc 0.0007
RT 4.267 Area 160
Q 329.00>169.00 (-) 1.08e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.275 Area 1140737
ISTD 332.00>286.80 (-) 2.89e5



HFPO_DA-13C
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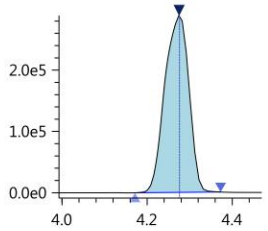
Q 332.00>286.80 (-) 2.89e5



4_2-FTS-13C_IS
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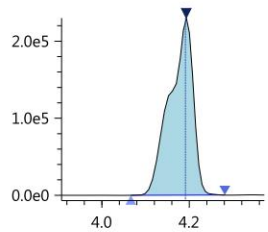
RT 4.193 Area 853003
ISTD 328.80>309.05 (-) 2.30e5



4_2-FTS-13C
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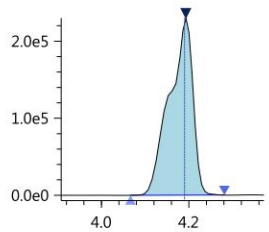
Q 328.80>309.05 (-) 2.30e5



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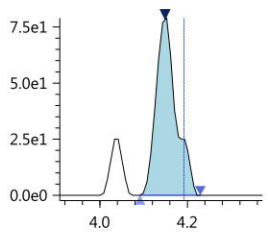
Conc 0.0013
RT 4.149 Area 255
Q 327.00>307.05 (-) 7.90e1



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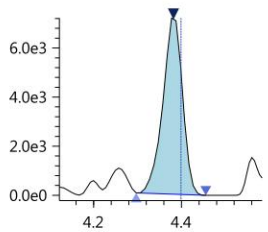
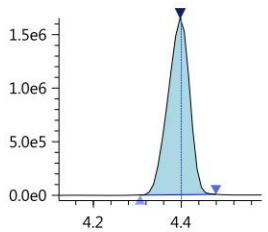
Q 362.90>319.00 (-) 7.22e3



PFHpA-13C_IS
Conc 5.0000
RT 4.398 Area 5708273
ISTD 366.90>322.10 (-) 1.65e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

PFHpA-13C
Conc 3.9481
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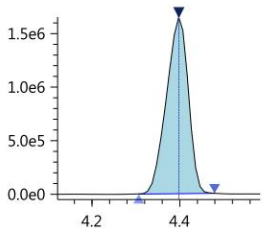
Q 366.90>322.10 (-) 1.65e6



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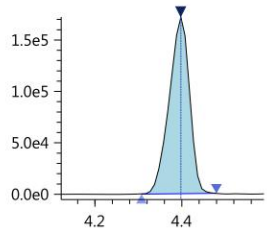
ISTD 402.70>84.05 (-) 1.72e5



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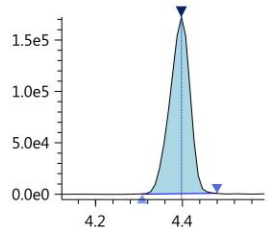
Q 402.70>84.05 (-) 1.72e5



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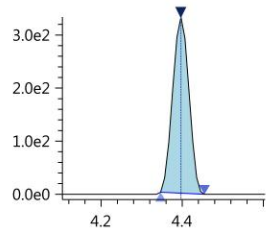
Q 399.00>80.00 (-) 3.34e2



6_2-FTS-13C
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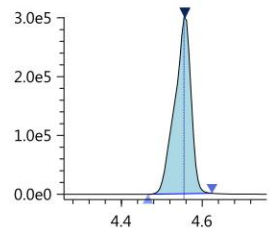
Q 428.90>409.00 (-) 3.01e5



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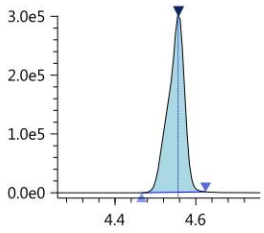

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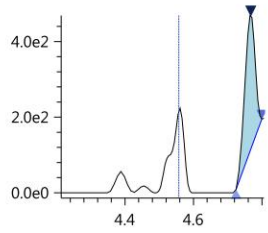
Q 427.00>407.00 (-) 4.69e2



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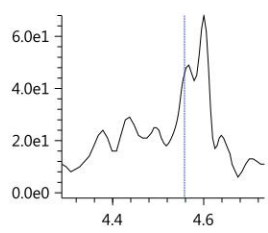
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 6.80e1



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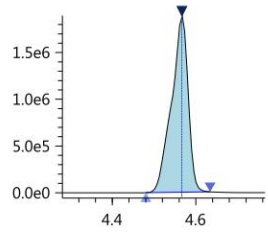
ISTD 416.80>372.05 (-) 1.90e6



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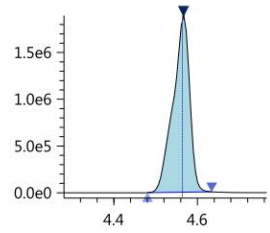

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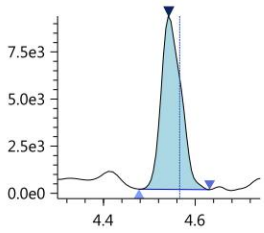

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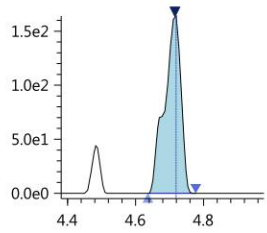
Q 499.00>80.00 (-) 1.64e2



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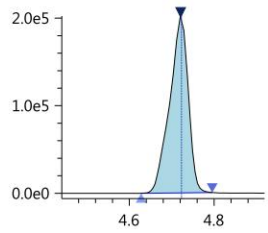
RT 4.721 Area 609630
ISTD 502.80>80.05 (-) 2.02e5



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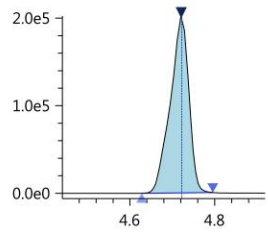

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Conc 5.0000
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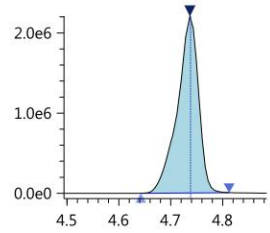
ISTD 467.80>423.00 (-) 2.21e6



PFNA-13C
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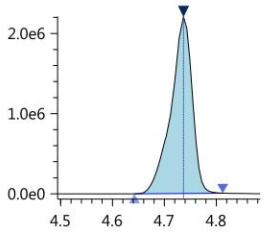

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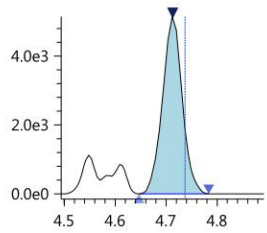
Conc -0.0004
RT 4.713 Area 13934
Q 463.00>418.90 (-) 5.15e3



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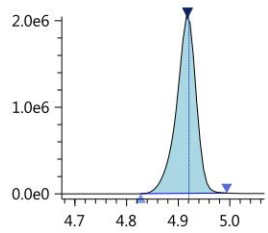
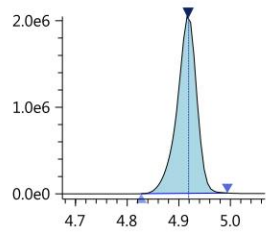
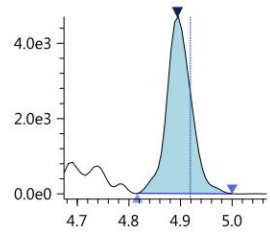


PFDA-13C
Conc 3.5874
RT 4.918 Area 5470104
Q 514.80>469.95 (-) 2.05e6



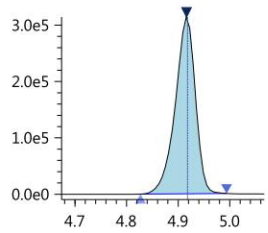
PFDA
Conc 0.0174
RT 4.894 Area 15521
Q 513.00>468.80 (-) 4.71e3



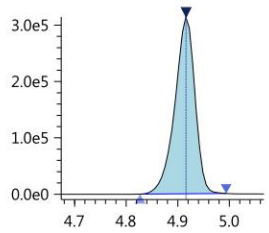
Insight Report

Printed at 3/21/2019 9:16:10 AM

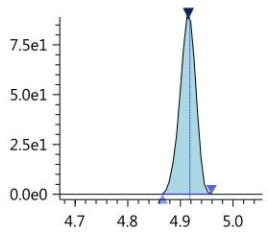
8_2-FTS-13C_IS
Conc 5.0000
RT 4.916 Area 850290
ISTD 528.80>509.00 (-) 3.14e5



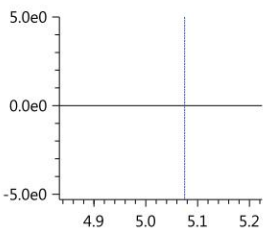
8_2-FTS-13C
Conc 4.4885
RT 4.916 Area 850290
Q 528.80>509.00 (-) 3.14e5



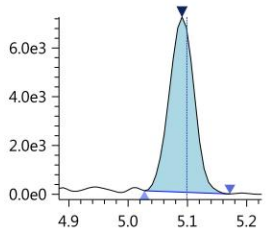
8_2-FTS_1
Conc 0.0012
RT 4.915 Area 194
Q 527.10>506.90 (-) 8.90e1



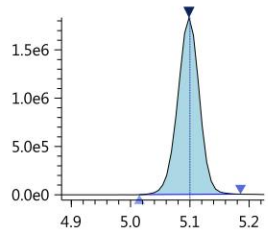
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc -0.0108
RT 5.091 Area 21309
Q 563.00>518.90 (-) 7.27e3



PFUnA-13C_IS
Conc 5.0000
RT 5.098 Area 4694858
ISTD 564.80>519.95 (-) 1.84e6



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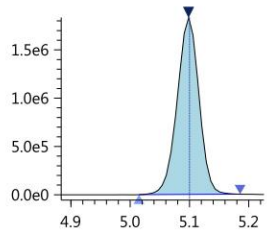
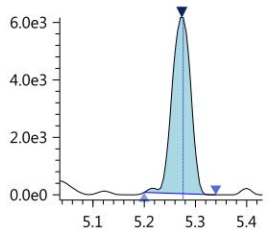
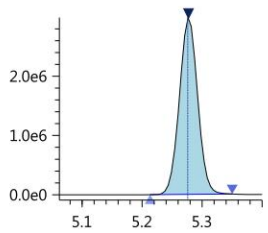
Conc 3.4220
RT 5.098 Area 4694858
Q 564.80>519.95 (-) 1.84e6



PFDoA
Conc 0.0106
RT 5.273 Area 15787
Q 613.05>569.00 (-) 6.17e3



PFDoA-13C
Conc 3.1672
RT 5.277 Area 6329484
Q 614.80>569.95 (-) 2.99e6



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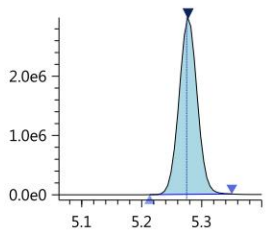
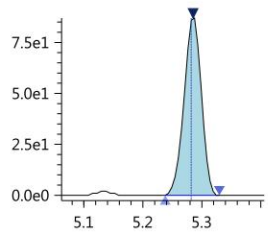
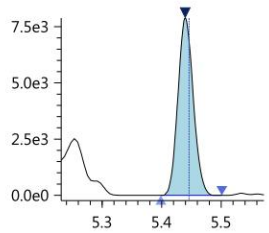
ISTD 614.80>569.95 (-) 2.99e6



10_2-FtS_1
Conc 0.0009
RT 5.285 Area 179
Q 627.00>606.95 (-) 8.70e1



PFTrDA
Conc 0.0014
RT 5.440 Area 14256
Q 663.00>618.90 (-) 7.89e3



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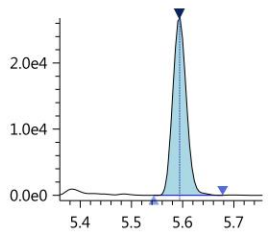
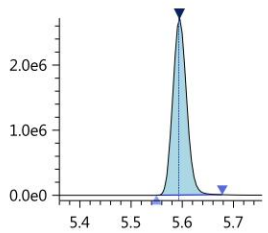
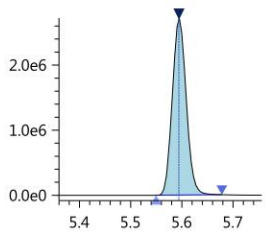
Conc 0.0019
RT 5.593 Area 50167
Q 713.40>669.00 (-) 2.68e4



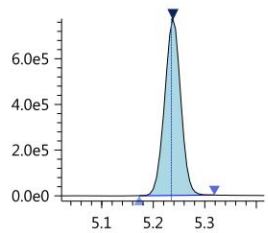
PFTeDA-13C
Conc 3.4707
RT 5.594 Area 5135496
Q 714.70>669.90 (-) 2.72e6



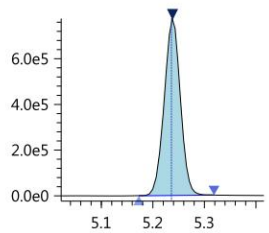
PFTeDA-13C_IS
Conc 5.0000
RT 5.594 Area 5135496
ISTD 714.70>669.90 (-) 2.72e6



FOSA-13C_IS
Conc 5.0000
RT 5.238 Area 1691665
ISTD 506.00>78.05 (-) 7.76e5



FOSA-13C
Conc 3.2958
RT 5.238 Area 1691665
Q 506.00>78.05 (-) 7.76e5



FOSA
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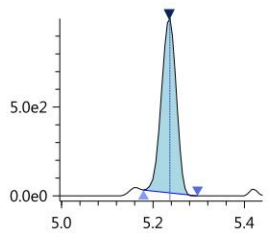
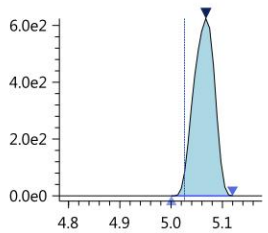
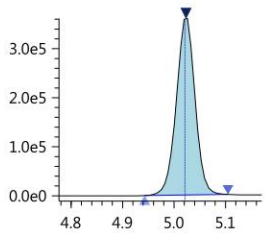
RT 5.235 Area 2233
Q 498.20>78.00 (-) 9.99e2



N-MeFOSAA
Conc 0.0161
RT 5.068 Area 1822
Q 570.20>419.00 (-) 6.24e2



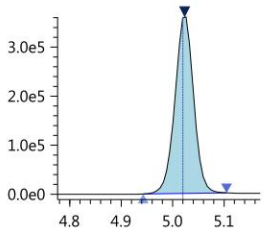
N-MeFOSAA-d3
Conc 2.4511
RT 5.023 Area 918085
Q 572.80>419.05 (-) 3.61e5



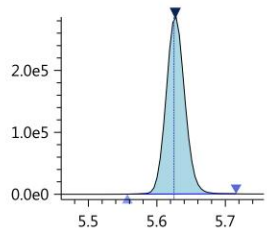
Insight Report

Printed at 3/21/2019 9:16:10 AM

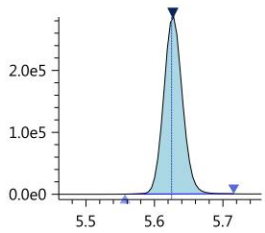
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.023 Area 918085
ISTD 572.80>419.05 (-) 3.61e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.627 Area 550145
ISTD 514.90>168.90 (-) 2.86e5



N-MeFOSA-d3
Conc 2.9494
RT 5.627 Area 550145
Q 514.90>168.90 (-) 2.86e5



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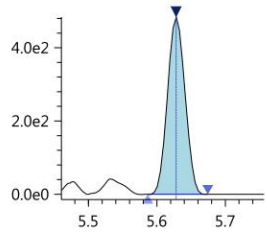
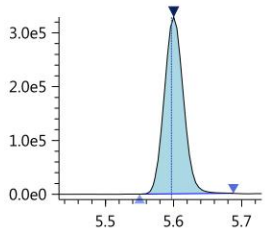
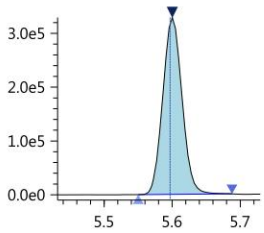
Conc 0.0066
RT 5.628 Area 866
Q 512.00>169.10 (-) 4.84e2



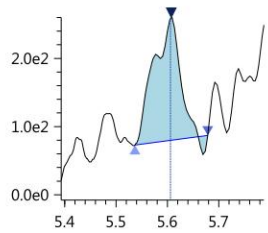
N-MeFOSE-d7
Conc 3.2755
RT 5.600 Area 646108
Q 622.70>59.10 (-) 3.29e5



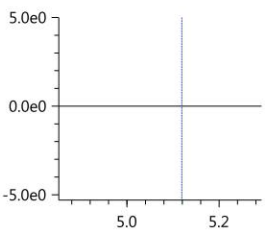
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.600 Area 646108
ISTD 622.70>59.10 (-) 3.29e5



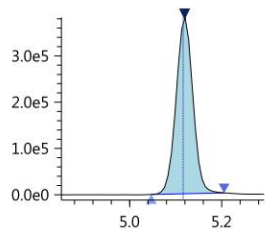
N-MeFOSE
Conc 0.0038
RT 5.608 Area 632
Q 616.00>59.00 (-) 2.60e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.119 Area 968705
ISTD 588.80>419.00 (-) 3.83e5



N-EtFOSAA-d5
Conc 2.5924
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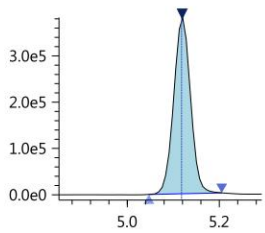
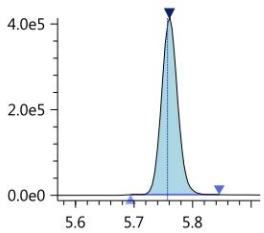
Q 588.80>419.00 (-) 3.83e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.760 Area 795349
ISTD 530.90>169.15 (-) 4.14e5



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Conc 3.0795
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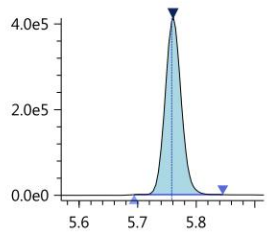
Q 530.90>169.15 (-) 4.14e5



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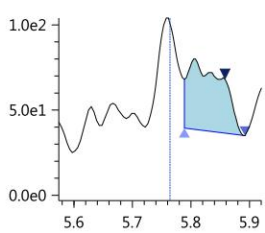
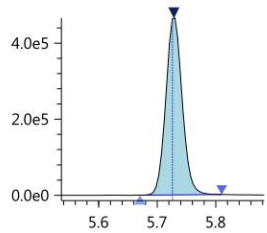
Conc 0.0064
RT 5.858 Area 169
Q 526.90>169.10 (-) 1.04e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.728 Area 908286
ISTD 638.70>59.10 (-) 4.66e5



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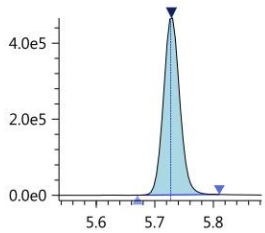
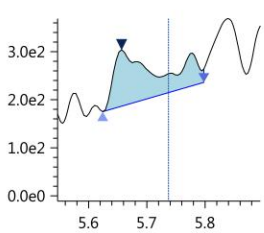
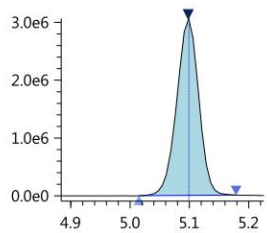
Conc 3.3361
RT 5.728 Area 908286
Q 638.70>59.10 (-) 4.66e5



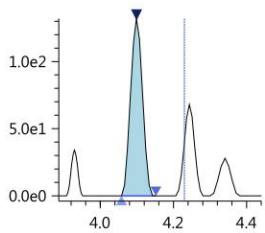
N-EtFOSE
Conc 0.0035
RT 5.657 Area 596
Q 630.00>58.90 (-) 3.69e2



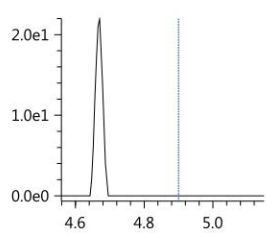
13C7-PFUnDA_IS
Conc 5.0000
RT 5.098 Area 7896984
ISTD 570.00>525.00 (-) 3.07e6



PFPeS
Conc 0.0037
RT 4.099 Area 300
Q 349.00>99.00 (-) 1.32e2



PFNS
Conc ----
RT ---- Area ----
Q 549.00>99.00 (-) 2.20e1



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_016
Lab ID: KQ1903443-03
RunType: LCS
Matrix: Ground Water

Date Acquired: 3/19/19 12:34
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok

Primary Review: _____

Printed: 3/21/19 10:05
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_016	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:34	**Vial:**	24
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1903443-03	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	KQ1903443
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.106	-0.01	7382503	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.005	-0.01	572892	2.9749	59	20 - 109	Y
18O2-PFHxS	4.406	-0.01	483270	3.6483	73	26 - 122	Y
13C4-PFOS	4.729	0.00	615845	3.9186	78	25 - 121	Y
13C4-PFBA	3.212	-0.14	2312725	3.5179	70	27 - 124	Y
13C5-PFPeA	3.955	-0.01	1563599	3.6690	73	27 - 138	Y
13C2-PFHxA	4.225	0.00	5040518	3.8354	77	28 - 132	Y
13C4-PFHpA	4.408	0.00	5710254	4.2247	84	19 - 139	Y
13C4-PFOA	4.574	0.00	5096772	3.7831	76	22 - 130	Y
13C5-PFNA	4.744	-0.01	6006484	3.9750	80	20 - 127	Y
13C2-PFDA	4.926	0.00	5215746	3.6590	73	24 - 125	Y
13C2-PFUnDA	5.107	-0.01	4303750	3.3555	67	22 - 125	Y
13C2-PFDoDA	5.284	0.00	6041381	3.2337	65	19 - 122	Y
13C2-PFTeDA	5.601	0.00	4845948	3.5033	70	13 - 124	Y
13C8-FOSA	5.245	0.00	1586596	3.3065	66	18 - 109	Y
D3-MeFOSAA	5.031	-0.01	808725	2.3096	46	9 - 123	Y
D5-EtFOSAA	5.128	0.00	869522	2.4891	50	12 - 126	Y
13C2-6:2 FTS	4.564	0.00	750800	4.9463	99	10 - 226	Y
13C2-8:2 FTS	4.925	0.00	729095	4.1169	82	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)	4.003	-0.01	111003	0.9029	28.9		Y
Perfluorohexane sulfonic acid (PFHxS)	4.405	-0.01	84728	0.8056	25.8		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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_016	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:34	**Vial:**	24
Run Type:	LCS	**Dilution:**	1
Lab ID:	KQ1903443-03	**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)	4.564	0.00	120184	1.0114	32.4		Y
Perfluorooctane sulfonic acid (PFOS)	4.729	0.00	76081	0.9068	29.0		Y
Perfluorodecane sulfonic acid (PFDS)	5.082	-0.01	90481	0.8866	28.4		Y
Perfluorobutanoic acid (PFBA)	3.345	-0.01	451702	1.0312	33.0		Y
Perfluoropentanoic acid (PFPeA)	3.955	-0.01	806629	0.9990	32.0		Y
Perfluorohexanoic acid (PFHxA)	4.225	0.00	971160	1.0451	33.4		Y
Perfluoroheptanoic acid (PFHpA)	4.408	0.00	972496	1.0437	33.4		Y
Perfluorooctanoic acid (PFOA)	4.573	0.00	888678	1.0328	33.0		Y
Perfluorononanoic acid (PFNA)	4.745	-0.01	913639	1.0996	35.2		Y
Perfluorodecanoic acid (PFDA)	4.926	0.00	848401	0.9968	31.9		Y
Perfluoroundecanoic acid (PFUnDA)	5.106	-0.01	720203	1.0444	33.4		Y
Perfluorododecanoic acid (PFDoDA)	5.284	0.00	773771	1.0607	33.9		Y
Perfluorotridecanoic acid (PFTrDA)	5.453	0.00	826058	0.9416	30.1		Y
Perfluorotetradecanoic acid (PFTeDA)	5.601	0.00	386317	1.0147	32.5		Y
Perfluorooctane sulfonamide (FOSA)	5.245	0.00	386444	0.9265	29.6		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.033	-0.01	98614	0.9889	31.6		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.133	0.00	101990	1.0033	32.1		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.564	0.00	156358	0.9848	31.5		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.924	0.00	119050	0.8538	27.3		Y

Prep Amount:	250 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 3/21/2019 9:48:23 AM

190319_016

Sample ID: KQ1903443-03
Date acquired: 3/19/2019 12:34:37 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_016.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.212	2312725	2312725	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.212	2312725	7382503	26	3.5179	ng/mL	----
PFBA	Auto	3.345	451702	2312725	2	1.0312	ng/mL	----
PFPeA-13C_IS	Auto	3.955	1563599	1563599	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.955	1563599	7382503	26	3.6690	ng/mL	----
PFPeA	Auto	3.955	806629	1563599	4	0.9990	ng/mL	----
PFBS_1	Auto	4.003	111003	572892	16	0.9029	ng/mL	----
PFBS-13C	Auto	4.005	572892	7382503	26	2.9749	ng/mL	----
PFBS-13C_IS	Auto	4.005	572892	572892	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.225	5040518	5040518	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.225	5040518	7382503	26	3.8354	ng/mL	----
PFHxA	Auto	4.225	971160	5040518	6	1.0451	ng/mL	----
PFHpA	Auto	4.408	972496	5710254	8	1.0437	ng/mL	----
PFHpA-13C_IS	Auto	4.408	5710254	5710254	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.408	5710254	7382503	26	4.2247	ng/mL	----
PFHxS-18O_IS	Auto	4.406	483270	483270	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.406	483270	7382503	26	3.6483	ng/mL	----
PFHxS_1	Auto	4.405	84728	483270	7	0.8056	ng/mL	----
6_2-FTS-13C	Auto	4.564	750800	7382503	26	4.9463	ng/mL	----
6_2-FTS-13C_IS	Auto	4.564	750800	750800	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.564	156358	750800	10	0.9848	ng/mL	----
PFHpS_1	Auto	4.564	120184	483270	7	1.0114	ng/mL	----
PFOA-13C_IS	Auto	4.574	5096772	5096772	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.574	5096772	7382503	26	3.7831	ng/mL	----
PFOA	Auto	4.573	888678	5096772	9	1.0328	ng/mL	----
PFOS_1	Auto	4.729	76081	615845	13	0.9068	ng/mL	----
PFOS-13C_IS	Auto	4.729	615845	615845	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.729	615845	7382503	26	3.9186	ng/mL	----
PFNA-13C_IS	Auto	4.744	6006484	6006484	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.744	6006484	7382503	26	3.9750	ng/mL	----
PFNA	Auto	4.745	913639	6006484	11	1.0996	ng/mL	----
PFDA-13C_IS	Auto	4.926	5215746	5215746	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.926	5215746	7382503	26	3.6590	ng/mL	----
PFDA	Auto	4.926	848401	5215746	12	0.9968	ng/mL	----
8_2-FTS-13C_IS	Auto	4.925	729095	729095	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.925	729095	7382503	26	4.1169	ng/mL	----
8_2-FTS_1	Auto	4.924	119050	729095	15	0.8538	ng/mL	----
PFUnA	Auto	5.106	720203	4303750	14	1.0444	ng/mL	----
PFUnA-13C_IS	Auto	5.107	4303750	4303750	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.107	4303750	7382503	26	3.3555	ng/mL	----
PFDoA	Auto	5.284	773771	6041381	17	1.0607	ng/mL	----
PFDoA-13C	Auto	5.284	6041381	7382503	26	3.2337	ng/mL	----
PFDoA-13C_IS	Auto	5.284	6041381	6041381	17	5.0000	ng/mL	----
PFTrDA	Auto	5.453	826058	4845948	22	0.9416	ng/mL	----
PFTeDA	Auto	5.601	386317	4845948	22	1.0147	ng/mL	----
PFTeDA-13C	Auto	5.601	4845948	7382503	26	3.5033	ng/mL	----
PFTeDA-13C_IS	Auto	5.601	4845948	4845948	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.245	1586596	1586596	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.245	1586596	7382503	26	3.3065	ng/mL	----
FOSA	Auto	5.245	386444	1586596	18	0.9265	ng/mL	----
N-MeFOSAA	Auto	5.033	98614	808725	19	0.9889	ng/mL	----
N-MeFOSAA-d3	Auto	5.031	808725	7382503	26	2.3096	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.031	808725	808725	19	5.0000	ng/mL	----
N-EtFOSAA	M	5.133	101990	869522	21	1.0033	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.128	869522	869522	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.128	869522	7382503	26	2.4891	ng/mL	----
13C7-PFUnDA_IS	Auto	5.106	7382503	7382503	26	5.0000	ng/mL	----

Insight Report

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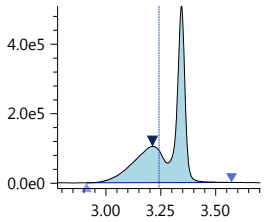
Conc 5.0000
RT 3.212 Area 2312725
ISTD 216.90>172.15 (-) 5.10e5



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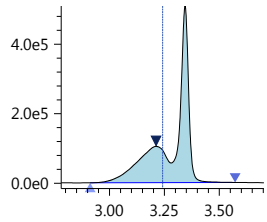

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Conc 1.0312
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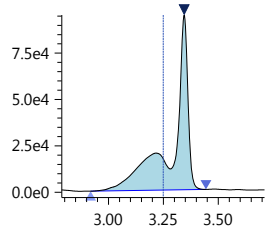
Q 213.00>169.10 (-) 9.56e4



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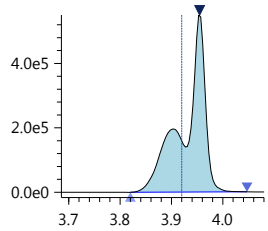

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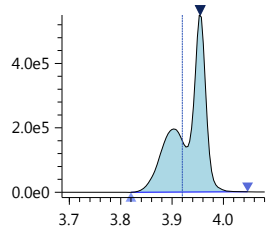

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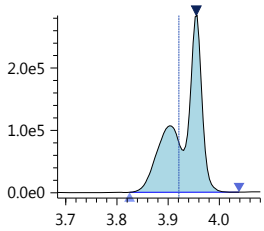

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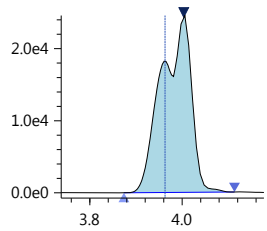

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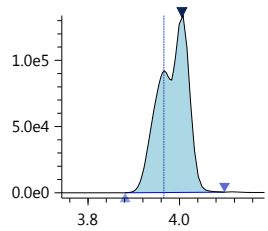

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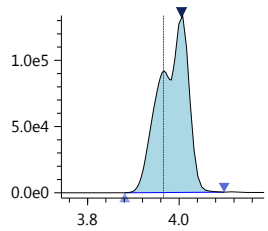

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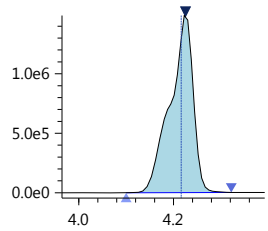

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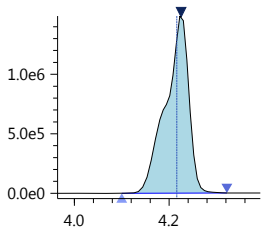

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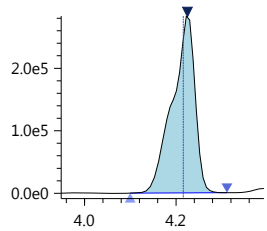

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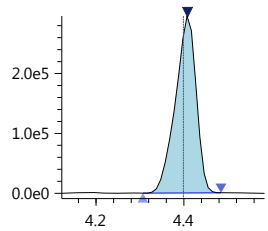

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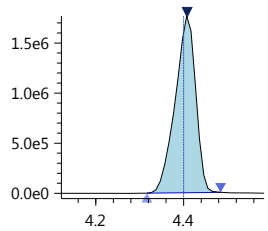

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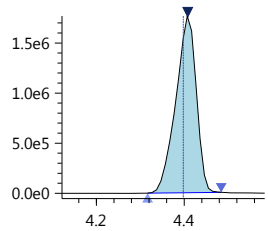

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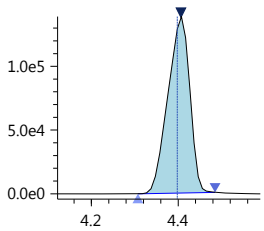

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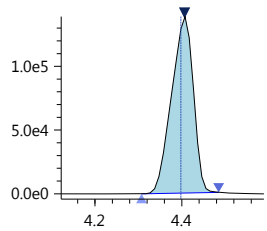

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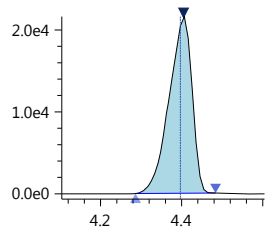
RT 4.405 Area 84728
Q 399.00>80.00 (-) 2.16e4



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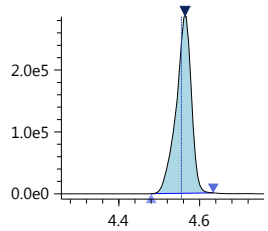
Conc 4.9463
RT 4.564 Area 750800
Q 428.90>409.00 (-) 2.86e5



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Conc 5.0000
RT 4.564 Area 750800
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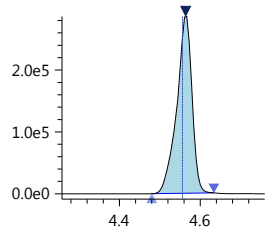

Insight Report

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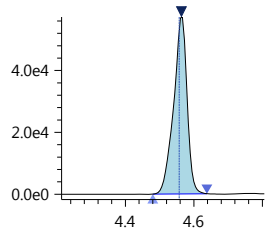

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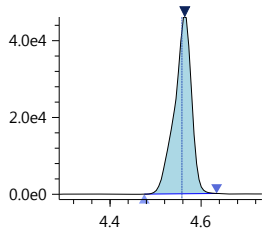
Conc 1.0114
RT 4.564 Area 120184
Q 449.00>80.15 (-) 4.62e4



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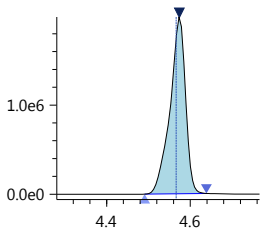
RT 4.574 Area 5096772
ISTD 416.80>372.05 (-) 1.99e6



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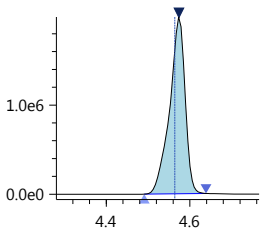
RT 4.574 Area 5096772
Q 416.80>372.05 (-) 1.99e6



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RT 4.573 Area 888678
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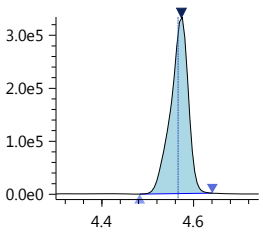

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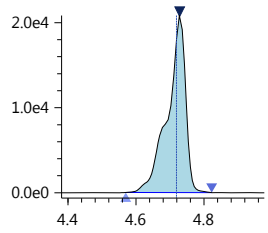

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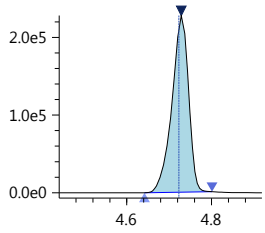

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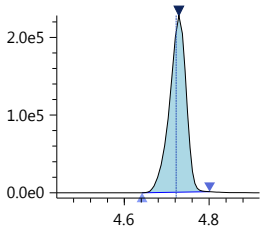

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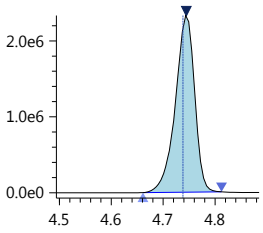

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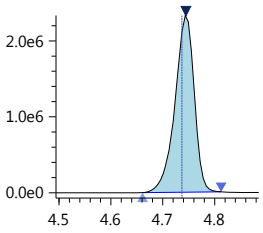

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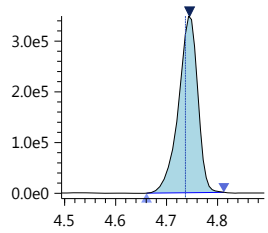

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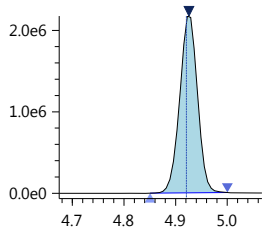

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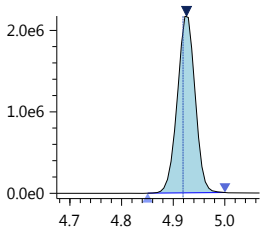

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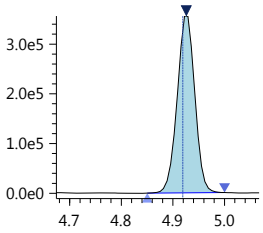
Q 513.00>468.80 (-) 3.56e5



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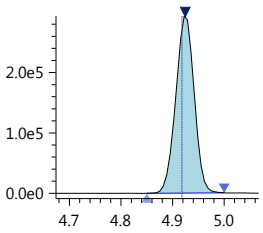
ISTD 528.80>509.00 (-) 2.94e5



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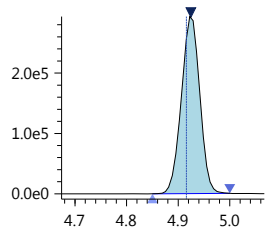
Q 528.80>509.00 (-) 2.94e5



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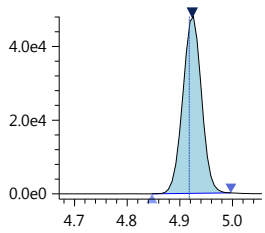

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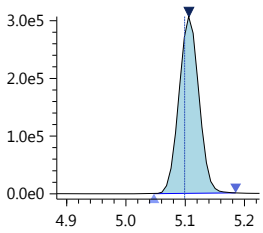

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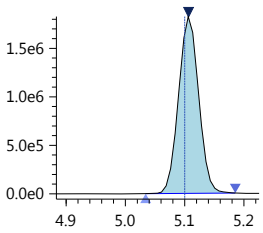

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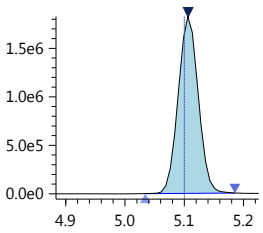

Insight Report

Printed at 3/21/2019 9:48:23 AM

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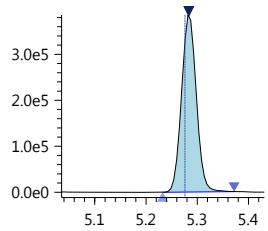

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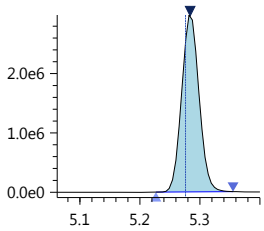
Q 614.80>569.95 (-) 2.99e6



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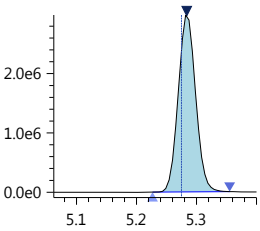
ISTD 614.80>569.95 (-) 2.99e6



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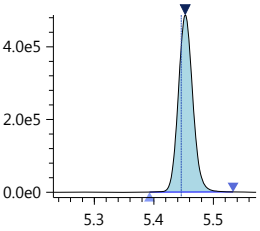

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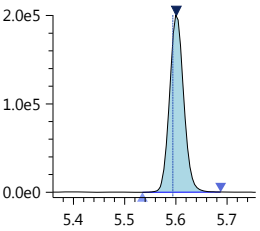

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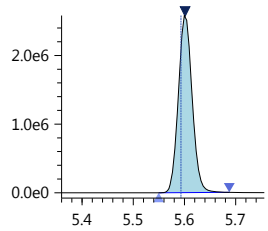

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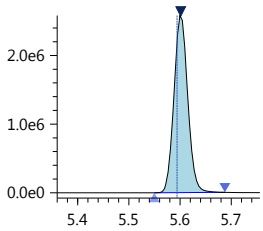

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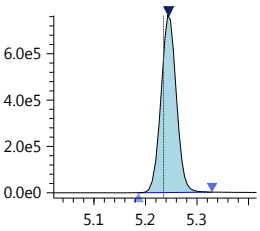

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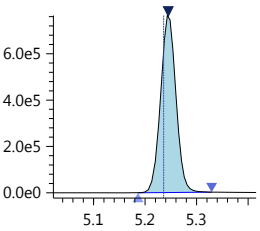
Q 506.00>78.05 (-) 7.65e5



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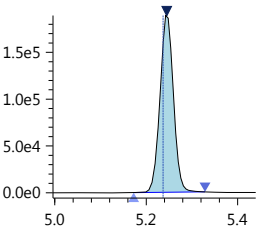

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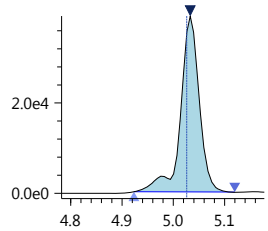

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Conc 2.3096
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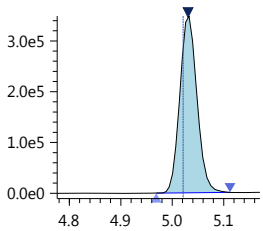
Q 572.80>419.05 (-) 3.49e5



N-MeFOSAA-d3_IS
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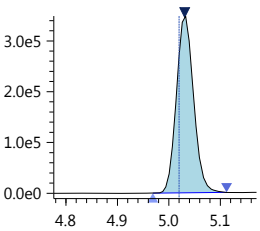
ISTD 572.80>419.05 (-) 3.49e5



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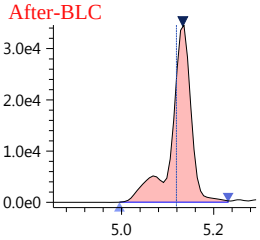
Conc 1.0033
RT 5.133 Area 101990
Q 584.20>418.95 (-) 3.46e4

After-BLC



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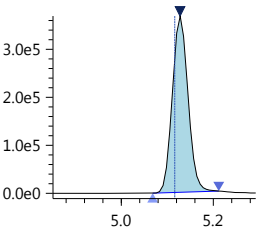

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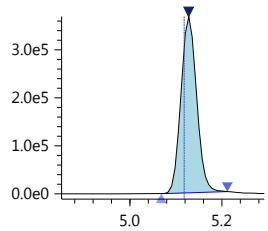

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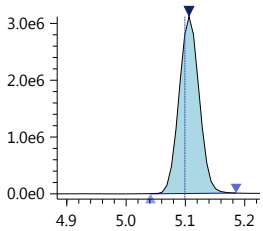

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Printed at 3/21/2019 9:16:10 AM

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PFBA-13C_IS
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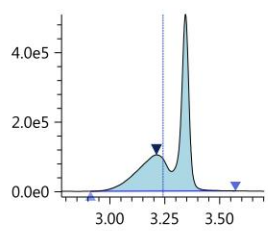

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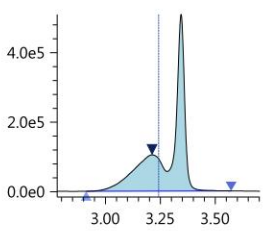

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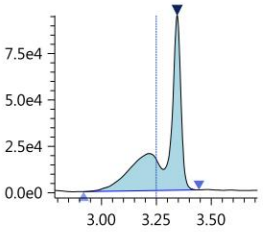

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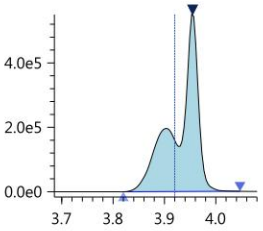
RT 3.955 Area 1563599
ISTD 267.90>223.00 (-) 5.51e5



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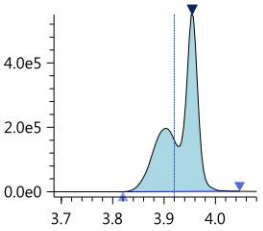

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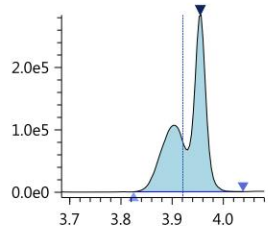

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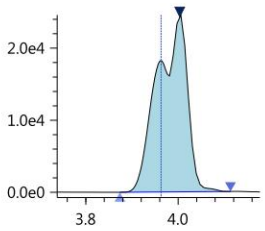
Q 299.00>80.00 (-) 2.46e4



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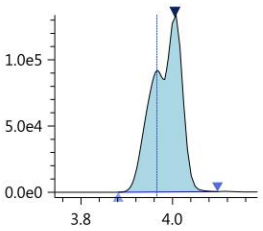

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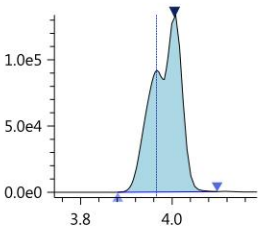
ISTD 301.80>80.00 (-) 1.34e5



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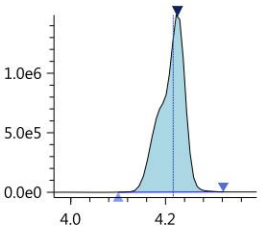
Conc 5.0000
RT 4.225 Area 5040518
ISTD 314.90>270.10 (-) 1.49e6



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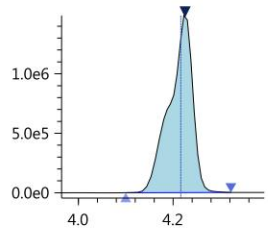
Conc 3.8354
RT 4.225 Area 5040518
Q 314.90>270.10 (-) 1.49e6



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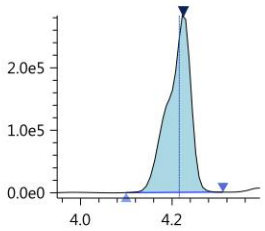
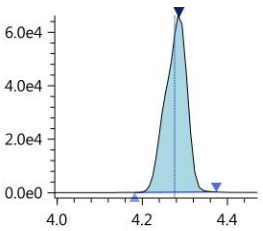
Conc 1.0451
RT 4.225 Area 971160
Q 313.00>269.00 (-) 2.84e5



HPFO_DA
Conc 0.9953
RT 4.286 Area 233335
Q 329.00>169.00 (-) 6.63e4



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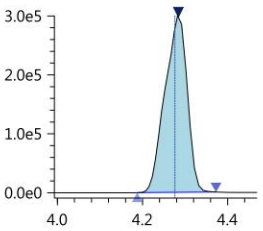
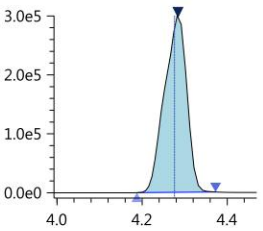
Conc 5.0000
RT 4.284 Area 1092416
ISTD 332.00>286.80 (-) 3.01e5



HFPO_DA-13C
Conc 3.8281
RT 4.284 Area 1092416
Q 332.00>286.80 (-) 3.01e5



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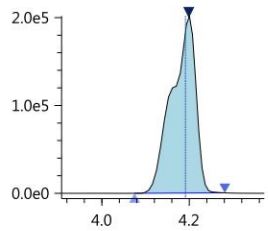
Conc 5.0000
RT 4.199 Area 764748
ISTD 328.80>309.05 (-) 2.02e5



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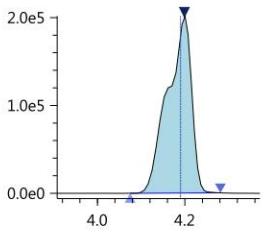
Conc 4.4571
RT 4.199 Area 764748
Q 328.80>309.05 (-) 2.02e5



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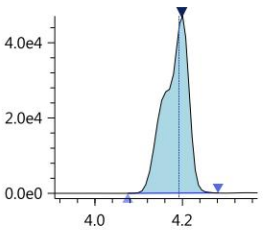
Conc 0.9899
RT 4.199 Area 175033
Q 327.00>307.05 (-) 4.71e4



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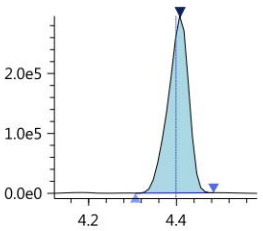
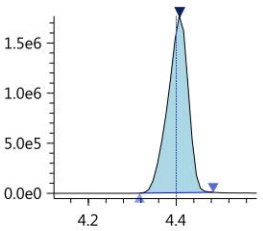
Conc 1.0437
RT 4.408 Area 972496
Q 362.90>319.00 (-) 2.96e5



PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 5710254
ISTD 366.90>322.10 (-) 1.77e6



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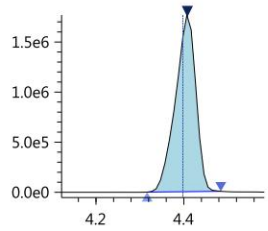
PFHpA-13C
Conc 4.2247
RT 4.408 Area 5710254
Q 366.90>322.10 (-) 1.77e6



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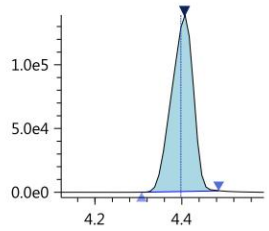
Conc 5.0000
RT 4.406 Area 483270
ISTD 402.70>84.05 (-) 1.39e5



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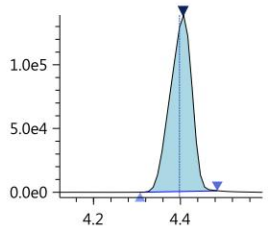
RT 4.406 Area 483270
Q 402.70>84.05 (-) 1.39e5



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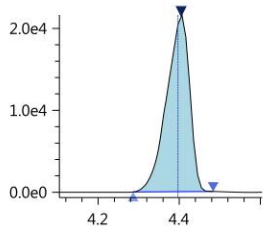
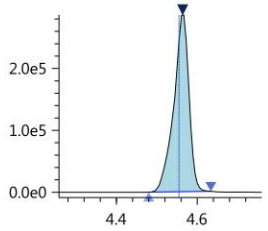
Conc 0.8056
RT 4.405 Area 84728
Q 399.00>80.00 (-) 2.16e4



6_2-FTS-13C
Conc 4.9463
RT 4.564 Area 750800
Q 428.90>409.00 (-) 2.86e5



6_2-FTS-13C_IS
Conc 5.0000
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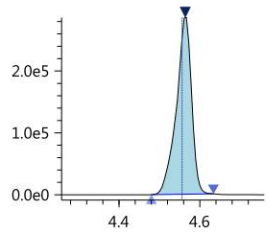
ISTD 428.90>409.00 (-) 2.86e5



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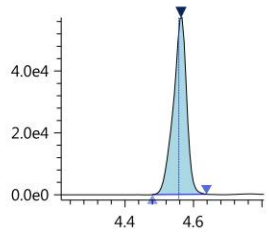
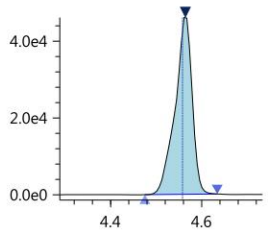
Conc 0.9848
RT 4.564 Area 156358
Q 427.00>407.00 (-) 5.73e4



PFHpS_1
Conc 1.0114
RT 4.564 Area 120184
Q 449.00>80.15 (-) 4.62e4



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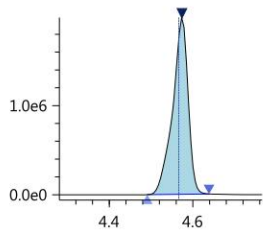
Conc 5.0000
RT 4.574 Area 5096772
ISTD 416.80>372.05 (-) 1.99e6



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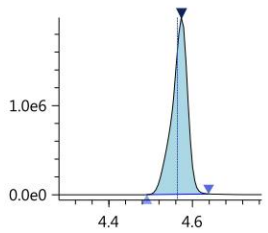
Q 416.80>372.05 (-) 1.99e6



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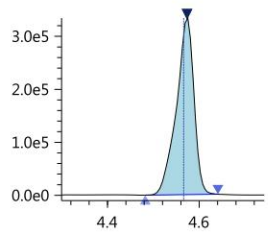
Q 413.00>369.00 (-) 3.35e5



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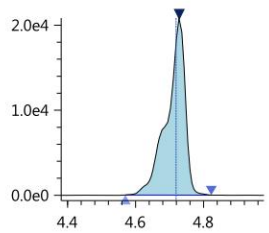
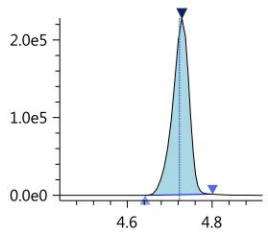
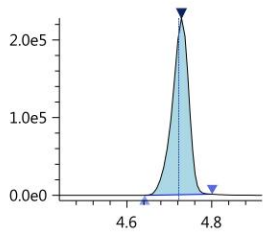
Conc 0.9068
RT 4.729 Area 76081
Q 499.00>80.00 (-) 2.08e4



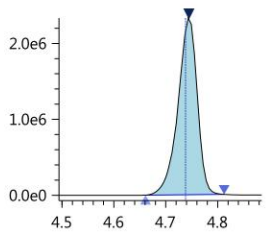
PFOS-13C_IS
Conc 5.0000
RT 4.729 Area 615845
ISTD 502.80>80.05 (-) 2.28e5



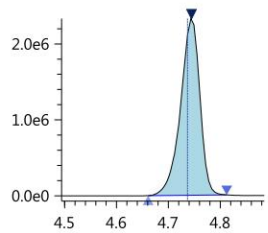
PFOS-13C
Conc 3.9186
RT 4.729 Area 615845
Q 502.80>80.05 (-) 2.28e5



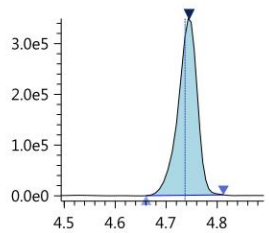
PFNA-13C_IS
Conc 5.0000
RT 4.744 Area 6006484
ISTD 467.80>423.00 (-) 2.33e6



PFNA-13C
Conc 3.9750
RT 4.744 Area 6006484
Q 467.80>423.00 (-) 2.33e6



PFNA
Conc 1.0996
RT 4.745 Area 913639
Q 463.00>418.90 (-) 3.49e5



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RT 4.926 Area 5215746
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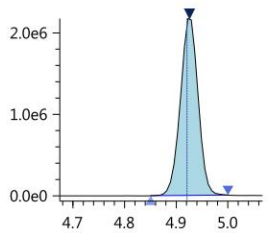

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Conc 3.6590
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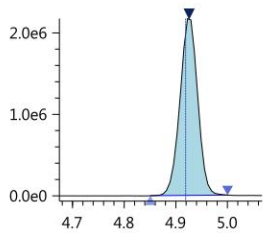
Q 514.80>469.95 (-) 2.18e6



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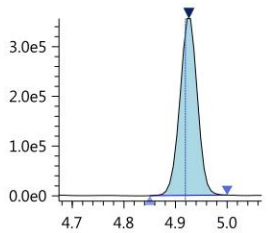
RT 4.926 Area 848401
Q 513.00>468.80 (-) 3.56e5



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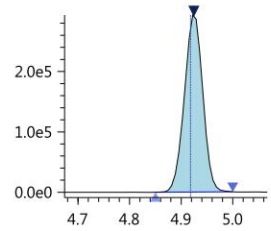
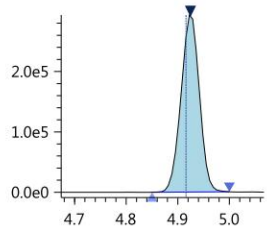
8_2-FTS-13C_IS
Conc 5.0000
RT 4.925 Area 729095
ISTD 528.80>509.00 (-) 2.94e5



8_2-FTS-13C
Conc 4.1169
RT 4.925 Area 729095
Q 528.80>509.00 (-) 2.94e5



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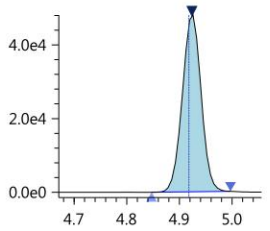
RT 4.924 Area 119050
Q 527.10>506.90 (-) 4.81e4



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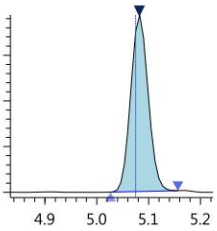
RT 5.082 Area 90481
Q 599.00>79.90 (-) 3.88e4



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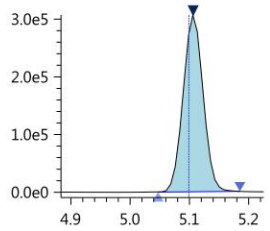
Conc 1.0444
RT 5.106 Area 720203
Q 563.00>518.90 (-) 3.07e5



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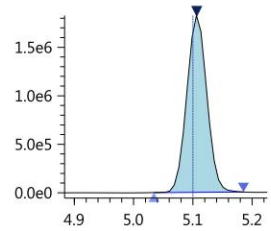
Conc 5.0000
RT 5.107 Area 4303750
ISTD 564.80>519.95 (-) 1.83e6



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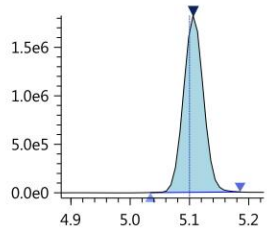
Conc 3.3555
RT 5.107 Area 4303750
Q 564.80>519.95 (-) 1.83e6



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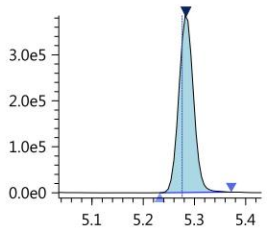
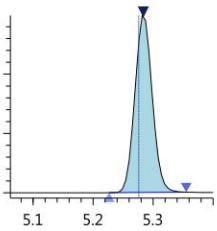
Conc 1.0607
RT 5.284 Area 773771
Q 613.05>569.00 (-) 3.86e5



PFDoA-13C
Conc 3.2337
RT 5.284 Area 6041381
Q 614.80>569.95 (-) 2.99e6



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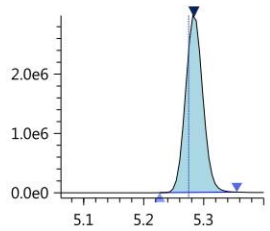
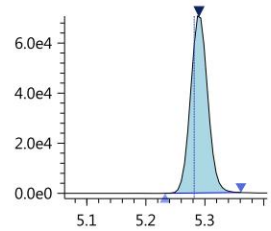
RT 5.284 Area 6041381
ISTD 614.80>569.95 (-) 2.99e6



10_2-FtS_1
Conc 0.8611
RT 5.290 Area 144406
Q 627.00>606.95 (-) 7.08e4



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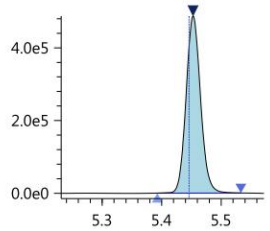
RT 5.453 Area 826058
Q 663.00>618.90 (-) 4.87e5



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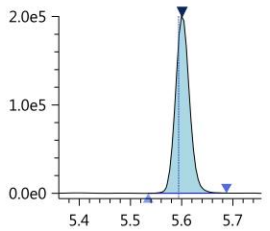
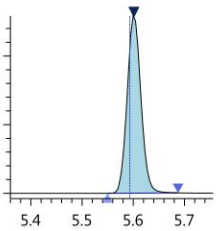
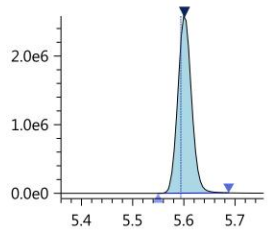
RT 5.601 Area 386317
Q 713.40>669.00 (-) 2.01e5



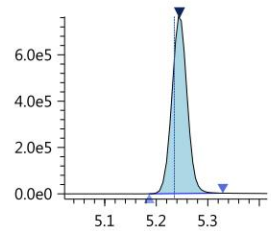
PFTeDA-13C
Conc 3.5033
RT 5.601 Area 4845948
Q 714.70>669.90 (-) 2.58e6



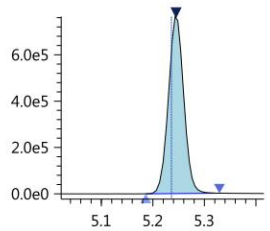
PFTeDA-13C_IS
Conc 5.0000
RT 5.601 Area 4845948
ISTD 714.70>669.90 (-) 2.58e6



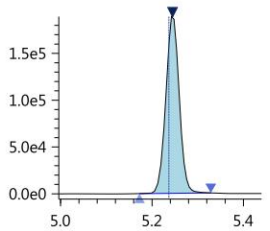
FOSA-13C_IS
Conc 5.0000
RT 5.245 Area 1586596
ISTD 506.00>78.05 (-) 7.65e5



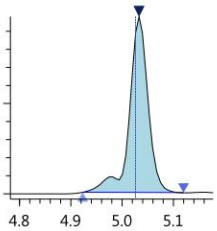
FOSA-13C
Conc 3.3065
RT 5.245 Area 1586596
Q 506.00>78.05 (-) 7.65e5



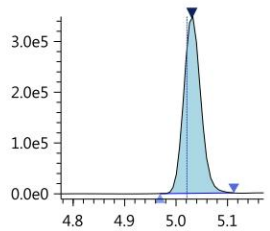
FOSA
Conc 0.9265
RT 5.245 Area 386444
Q 498.20>78.00 (-) 1.89e5



N-MeFOSAA
Conc 0.9889
RT 5.033 Area 98614
Q 570.20>419.00 (-) 3.93e4



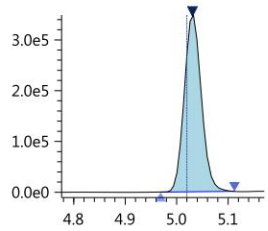
N-MeFOSAA-d3
Conc 2.3096
RT 5.031 Area 808725
Q 572.80>419.05 (-) 3.49e5



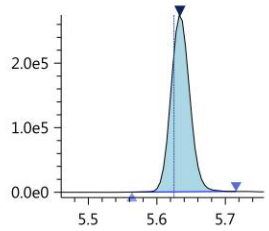
Insight Report

Printed at 3/21/2019 9:16:10 AM

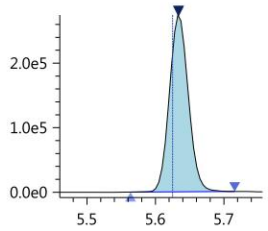
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.031 Area 808725
ISTD 572.80>419.05 (-) 3.49e5



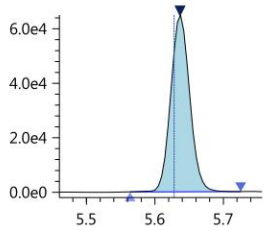
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.634 Area 528484
ISTD 514.90>168.90 (-) 2.75e5



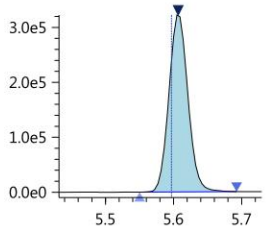
N-MeFOSA-d3
Conc 3.0307
RT 5.634 Area 528484
Q 514.90>168.90 (-) 2.75e5



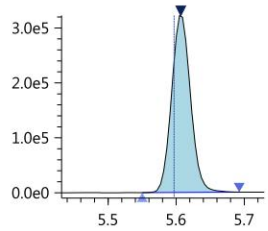
N-MeFOSA
Conc 1.0028
RT 5.637 Area 125568
Q 512.00>169.10 (-) 6.51e4



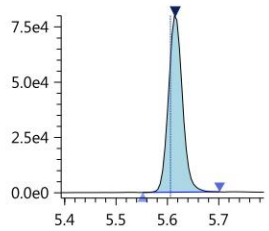
N-MeFOSE-d7
Conc 3.3998
RT 5.607 Area 626922
Q 622.70>59.10 (-) 3.23e5



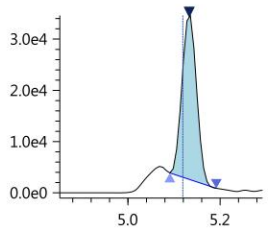
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.607 Area 626922
ISTD 622.70>59.10 (-) 3.23e5



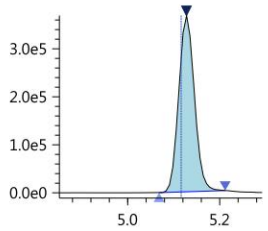
N-MeFOSE
Conc 0.9417
RT 5.615 Area 152484
Q 616.00>59.00 (-) 8.02e4



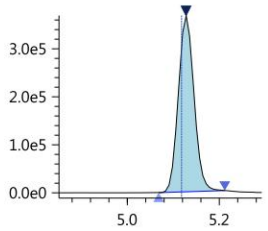
N-EtFOSAA
Conc 0.6959
RT 5.133 Area 70749
Q 584.20>418.95 (-) 3.46e4



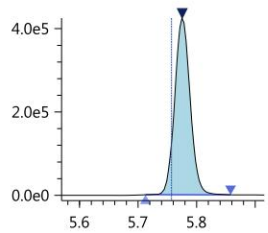
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.128 Area 869522
ISTD 588.80>419.00 (-) 3.69e5



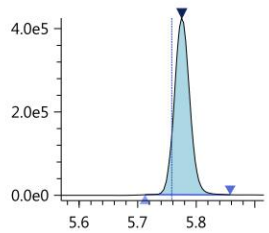
N-EtFOSAA-d5
Conc 2.4891
RT 5.128 Area 869522
Q 588.80>419.00 (-) 3.69e5



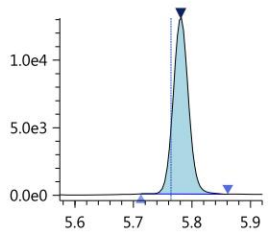
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.775 Area 779942
ISTD 530.90>169.15 (-) 4.26e5



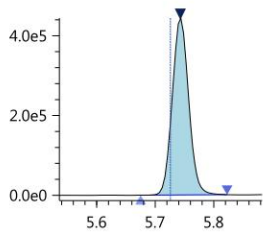
N-EtFOSA-d9
Conc 3.2303
RT 5.775 Area 779942
Q 530.90>169.15 (-) 4.26e5



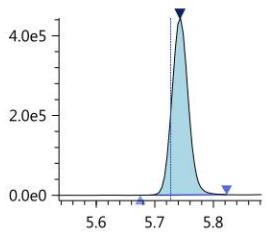
N-EtFOSA
Conc 0.9235
RT 5.781 Area 24008
Q 526.90>169.10 (-) 1.31e4



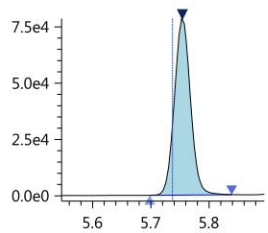
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.743 Area 865593
ISTD 638.70>59.10 (-) 4.44e5



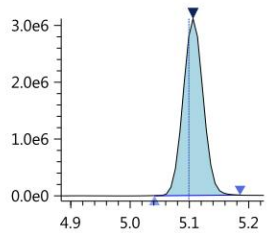
N-EtFOSE-d9
Conc 3.4009
RT 5.743 Area 865593
Q 638.70>59.10 (-) 4.44e5



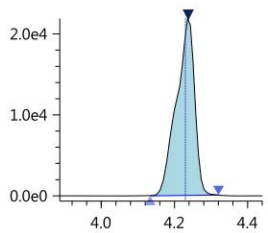
N-EtFOSE
Conc 0.9284
RT 5.754 Area 150581
Q 630.00>58.90 (-) 7.87e4



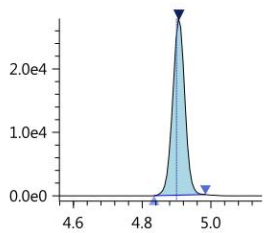
13C7-PFUnDA_IS
Conc 5.0000
RT 5.106 Area 7382503
ISTD 570.00>525.00 (-) 3.12e6



PFPeS
Conc 1.0160
RT 4.238 Area 75371
Q 349.00>99.00 (-) 2.19e4



PFNS
Conc 0.8007
RT 4.907 Area 69029
Q 549.00>99.00 (-) 2.79e4



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_027
Lab ID: KQ1903443-01
RunType: MS
Matrix: Ground Water

Date Acquired: 3/19/19 14:29
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok
Above Highest ICAL Level	Perfluorohexane sulfonic acid (PFHxS)	3241509		1420175	Na for MS/DMS

Primary Review: _____

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_027	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:29	**Vial:**	22
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1903443-01	**Raw Units:**	ng/mL

Bottle ID:	K1902064-010.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	KQ1903443
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.118	+0.00	7285240	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.012		483890	2.5463	51	20 - 109	Y
18O2-PFHxS	4.418	+0.01	353039	2.7007	54	26 - 122	Y
13C4-PFOS	4.739	+0.01	638357	4.1161	82	25 - 121	Y
13C4-PFBA	3.356		2404801	3.7067	74	27 - 124	Y
13C5-PFPeA	3.964	+0.00	1499363	3.5652	71	27 - 138	Y
13C2-PFHxA	4.234	+0.00	4304380	3.3190	66	28 - 132	Y
13C4-PFHpA	4.421	+0.01	3571739	2.6778	54	19 - 139	Y
13C4-PFOA	4.583	+0.01	4840457	3.6408	73	22 - 130	Y
13C5-PFNA	4.756	+0.01	5287807	3.5461	71	20 - 127	Y
13C2-PFDA	4.940	+0.01	4942375	3.5135	70	24 - 125	Y
13C2-PFUnDA	5.119	+0.01	4134275	3.2664	65	22 - 125	Y
13C2-PFDoDA	5.294	+0.01	5261304	2.8538	57	19 - 122	Y
13C2-PFTeDA	5.608	+0.01	4149473	3.0398	61	13 - 124	Y
13C8-FOSA	5.257	+0.01	1503208	3.1745	63	18 - 109	Y
D3-MeFOSAA	5.044	+0.01	712024	2.0605	41	9 - 123	Y
D5-EtFOSAA	5.139	+0.01	768140	2.2282	45	12 - 126	Y
13C2-6:2 FTS	4.573	+0.01	689114	4.6005	92	10 - 226	Y
13C2-8:2 FTS	4.938	+0.01	638808	3.6553	73	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	890279	8.5731	232		Y
Perfluorohexane sulfonic acid (PFHxS)	4.410		3241509	42.1894	1140	E	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 CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_027	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:29	**Vial:**	22
Run Type:	MS	**Dilution:**	1
Lab ID:	KQ1903443-01	**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)	4.573	+0.01	172457	1.9866	53.9		Y
Perfluorooctane sulfonic acid (PFOS)	4.739	+0.01	354299	4.0740	110		Y
Perfluorodecane sulfonic acid (PFDS)	5.095	+0.00	80970	0.7654	20.8		Y
Perfluorobutanoic acid (PFBA)	3.357		2591095	5.6887	154		Y
Perfluoropentanoic acid (PFPeA)	3.965	+0.00	10785815	15.5711	422		Y
Perfluorohexanoic acid (PFHxA)	4.234	+0.00	12149060	15.7889	428		Y
Perfluoroheptanoic acid (PFHpA)	4.421	+0.01	7024482	12.4738	338		Y
Perfluorooctanoic acid (PFOA)	4.583	+0.01	4385223	5.4723	148		Y
Perfluorononanoic acid (PFNA)	4.756	+0.01	1488884	2.0497	55.6		Y
Perfluorodecanoic acid (PFDA)	4.939	+0.01	769685	0.9544	25.9		Y
Perfluoroundecanoic acid (PFUnDA)	5.118	+0.00	696577	1.0518	28.5		Y
Perfluorododecanoic acid (PFDoDA)	5.295	+0.01	672518	1.0586	28.7		Y
Perfluorotridecanoic acid (PFTrDA)	5.461	+0.01	665895	0.8856	24.0		Y
Perfluorotetradecanoic acid (PFTeDA)	5.609	+0.01	338764	1.0425	28.3		Y
Perfluorooctane sulfonamide (FOSA)	5.257	+0.01	362952	0.9185	24.9		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.046	+0.01	74277	0.8460	22.9		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.143	+0.01	92145	1.0261	27.8		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.573	+0.01	781143	5.3606	145		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.937	+0.01	153931	1.2599	34.2		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

Printed: 3/21/19 10:05

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_027

Sample ID: KQ1903443-01
Date acquired: 3/19/2019 2:29:40 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_027.lcd
Vial: 13 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.356	2404801	2404801	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.356	2404801	7285240	26	3.7067	ng/mL	----
PFBA	Auto	3.357	2591095	2404801	2	5.6887	ng/mL	----
PFPeA-13C_IS	Auto	3.964	1499363	1499363	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.964	1499363	7285240	26	3.5652	ng/mL	----
PFPeA	M	3.965	10785815	1499363	4	15.5711	ng/mL	----
PFBS_1	Auto	4.010	890279	483890	16	8.5731	ng/mL	----
PFBS-13C	Auto	4.012	483890	7285240	26	2.5463	ng/mL	----
PFBS-13C_IS	Auto	4.012	483890	483890	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.234	4304380	4304380	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.234	4304380	7285240	26	3.3190	ng/mL	----
PFHxA	Auto	4.234	12149060	4304380	6	15.7889	ng/mL	----
PFHpA	Auto	4.421	7024482	3571739	8	12.4738	ng/mL	----
PFHpA-13C_IS	Auto	4.421	3571739	3571739	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.421	3571739	7285240	26	2.6778	ng/mL	----
PFHxS-18O_IS	Auto	4.418	353039	353039	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.418	353039	7285240	26	2.7007	ng/mL	----
PFHxS_1	Auto	4.410	3241509	353039	7	42.1894	ng/mL	----
6_2-FTS-13C	Auto	4.573	689114	7285240	26	4.6005	ng/mL	----
6_2-FTS-13C_IS	Auto	4.573	689114	689114	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.573	781143	689114	10	5.3606	ng/mL	----
PFHpS_1	M	4.573	172457	353039	7	1.9866	ng/mL	----
PFOA-13C_IS	Auto	4.583	4840457	4840457	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.583	4840457	7285240	26	3.6408	ng/mL	----
PFOA	Auto	4.583	4385223	4840457	9	5.4723	ng/mL	----
PFOS_1	Auto	4.739	354299	638357	13	4.0740	ng/mL	----
PFOS-13C_IS	Auto	4.739	638357	638357	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.739	638357	7285240	26	4.1161	ng/mL	----
PFNA-13C_IS	Auto	4.756	5287807	5287807	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.756	5287807	7285240	26	3.5461	ng/mL	----
PFNA	Auto	4.756	1488884	5287807	11	2.0497	ng/mL	----
PFDA-13C_IS	Auto	4.940	4942375	4942375	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.940	4942375	7285240	26	3.5135	ng/mL	----
PFDA	Auto	4.939	769685	4942375	12	0.9544	ng/mL	----
8_2-FTS-13C_IS	Auto	4.938	638808	638808	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.938	638808	7285240	26	3.6553	ng/mL	----
8_2-FTS_1	Auto	4.937	153931	638808	15	1.2599	ng/mL	----
PFUnA	Auto	5.118	696577	4134275	14	1.0518	ng/mL	----
PFUnA-13C_IS	Auto	5.119	4134275	4134275	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.119	4134275	7285240	26	3.2664	ng/mL	----
PFDoA	Auto	5.295	672518	5261304	17	1.0586	ng/mL	----
PFDoA-13C	Auto	5.294	5261304	7285240	26	2.8538	ng/mL	----
PFDoA-13C_IS	Auto	5.294	5261304	5261304	17	5.0000	ng/mL	----
PFTrDA	Auto	5.461	665895	4149473	22	0.8856	ng/mL	----
PFTeDA	Auto	5.609	338764	4149473	22	1.0425	ng/mL	----
PFTeDA-13C	Auto	5.608	4149473	7285240	26	3.0398	ng/mL	----
PFTeDA-13C_IS	Auto	5.608	4149473	4149473	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.257	1503208	1503208	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.257	1503208	7285240	26	3.1745	ng/mL	----
FOSA	Auto	5.257	362952	1503208	18	0.9185	ng/mL	----
N-MeFOSAA	Auto	5.046	74277	712024	19	0.8460	ng/mL	----
N-MeFOSAA-d3	Auto	5.044	712024	7285240	26	2.0605	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.044	712024	712024	19	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.143	92145	768140	21	1.0261	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.139	768140	768140	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.139	768140	7285240	26	2.2282	ng/mL	----
13C7-PFUnDA_IS	Auto	5.118	7285240	7285240	26	5.0000	ng/mL	----

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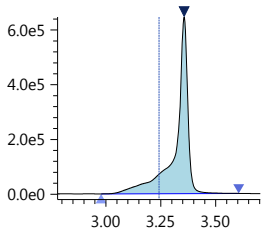
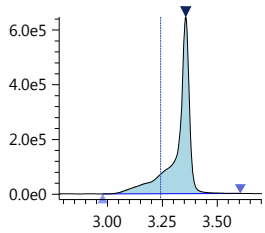
PFBA-13C_IS
Conc 5.0000
RT 3.356 Area 2404801
ISTD 216.90>172.15 (-) 6.47e5



PFBA-13C
Conc 3.7067
RT 3.356 Area 2404801
Q 216.90>172.15 (-) 6.47e5



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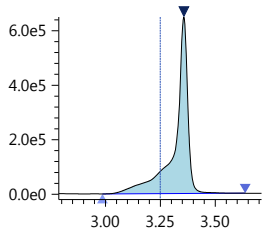
Conc 5.6887
RT 3.357 Area 2591095
Q 213.00>169.10 (-) 6.50e5



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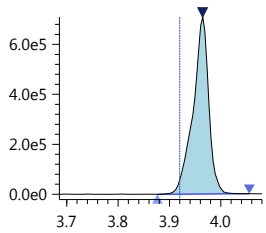
Conc 5.0000
RT 3.964 Area 1499363
ISTD 267.90>223.00 (-) 7.10e5



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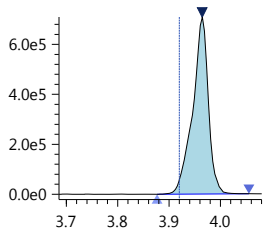
Conc 3.5652
RT 3.964 Area 1499363
Q 267.90>223.00 (-) 7.10e5



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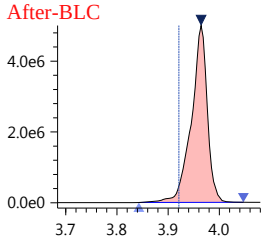
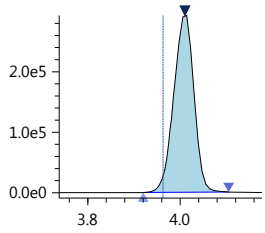
Conc 15.5711
RT 3.965 Area 10785815
Q 263.05>219.10 (-) 5.01e6

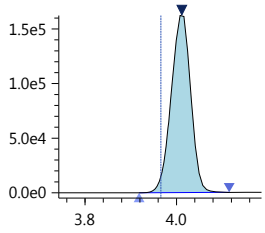
After-BLC



PFBS_1
Conc 8.5731
RT 4.010 Area 890279
Q 299.00>80.00 (-) 2.93e5



PFBS-13C
Conc 2.5463
RT 4.012 Area 483890
Q 301.80>80.00 (-) 1.62e5



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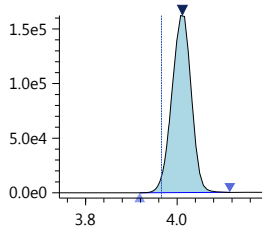
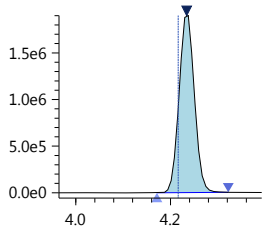
Conc 5.0000
RT 4.012 Area 483890
ISTD 301.80>80.00 (-) 1.62e5



PFHxA-13C_IS
Conc 5.0000
RT 4.234 Area 4304380
ISTD 314.90>270.10 (-) 1.90e6



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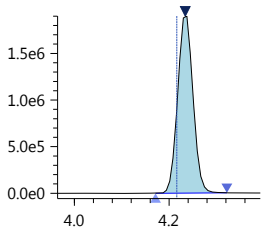

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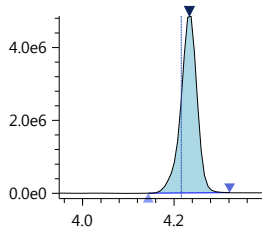
RT 4.234 Area 12149060
Q 313.00>269.00 (-) 4.86e6



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Conc 12.4738
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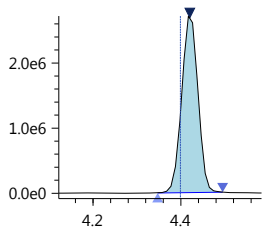
Q 362.90>319.00 (-) 2.72e6



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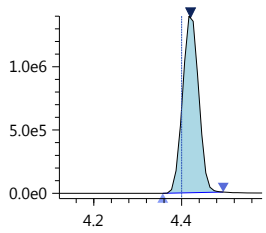
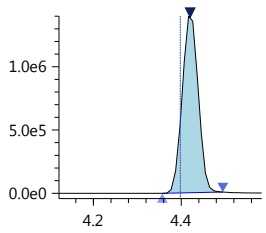
Conc 5.0000
RT 4.421 Area 3571739
ISTD 366.90>322.10 (-) 1.40e6



PFHpA-13C
Conc 2.6778
RT 4.421 Area 3571739
Q 366.90>322.10 (-) 1.40e6



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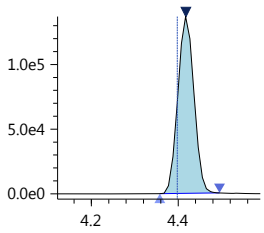
Conc 5.0000
RT 4.418 Area 353039
ISTD 402.70>84.05 (-) 1.37e5



PFHxS-18O
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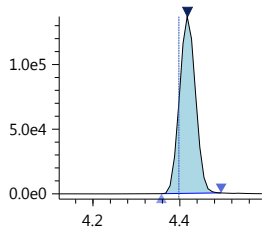
Q 402.70>84.05 (-) 1.37e5



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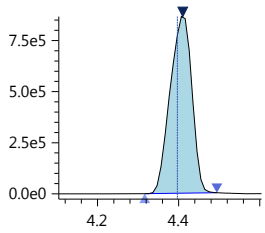
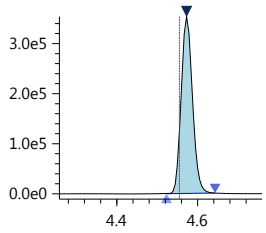
Conc 42.1894
RT 4.410 Area 3241509
Q 399.00>80.00 (-) 8.67e5



6_2-FTS-13C
Conc 4.6005
RT 4.573 Area 689114
Q 428.90>409.00 (-) 3.54e5



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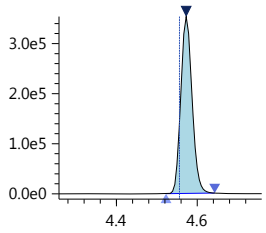
Conc 5.0000
RT 4.573 Area 689114
ISTD 428.90>409.00 (-) 3.54e5



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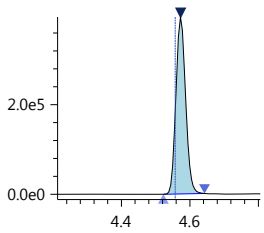
6_2-FTS_1
Conc 5.3606
RT 4.573 Area 781143
Q 427.00>407.00 (-) 3.96e5



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Conc 1.9866
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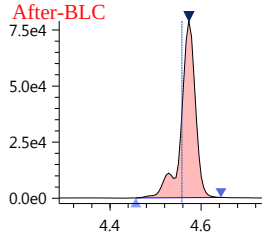
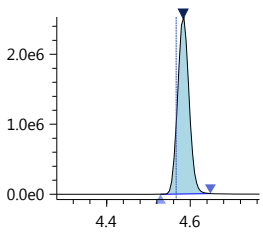
Q 449.00>80.15 (-) 7.90e4



PFOA-13C_IS
Conc 5.0000
RT 4.583 Area 4840457
ISTD 416.80>372.05 (-) 2.53e6



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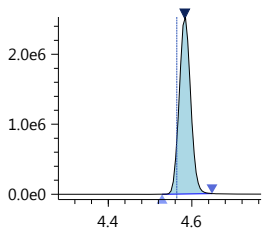
Conc 3.6408
RT 4.583 Area 4840457
Q 416.80>372.05 (-) 2.53e6



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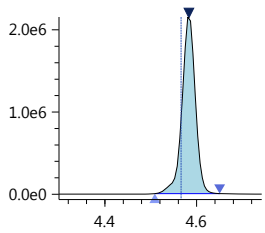
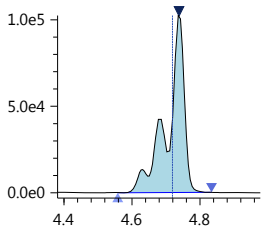
Q 413.00>369.00 (-) 2.16e6



PFOS_1
Conc 4.0740
RT 4.739 Area 354299
Q 499.00>80.00 (-) 1.03e5



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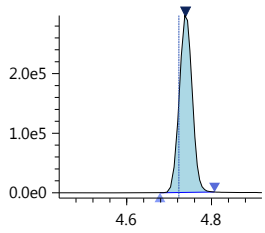
ISTD 502.80>80.05 (-) 2.98e5



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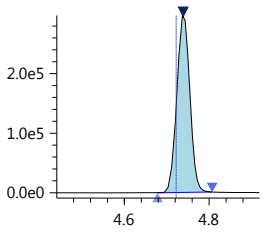

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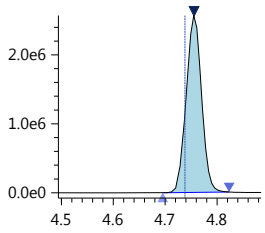
Conc 5.0000
RT 4.756 Area 5287807
ISTD 467.80>423.00 (-) 2.57e6



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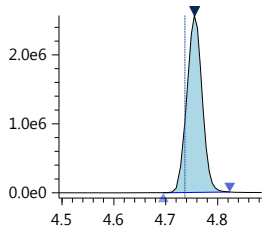

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Conc 2.0497
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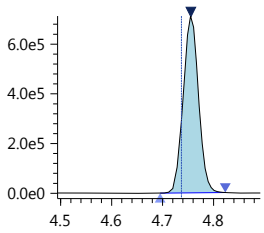
Q 463.00>418.90 (-) 7.13e5



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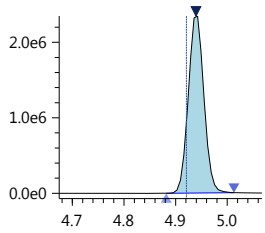

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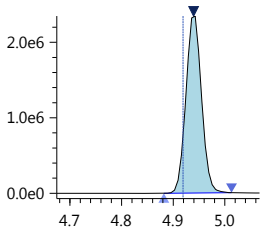
Q 514.80>469.95 (-) 2.35e6



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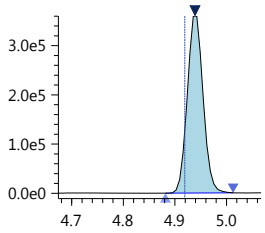
Conc 0.9544
RT 4.939 Area 769685
Q 513.00>468.80 (-) 3.60e5



8_2-FTS-13C_IS
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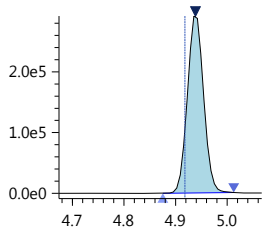
RT 4.938 Area 638808
ISTD 528.80>509.00 (-) 2.92e5



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Conc 3.6553
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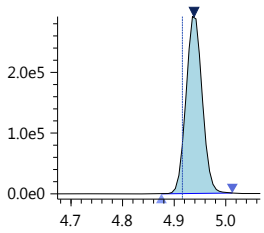
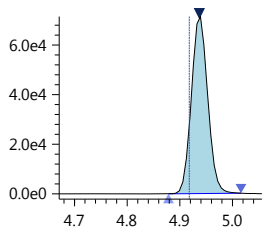
Q 528.80>509.00 (-) 2.92e5



8_2-FTS_1
Conc 1.2599
RT 4.937 Area 153931
Q 527.10>506.90 (-) 7.15e4



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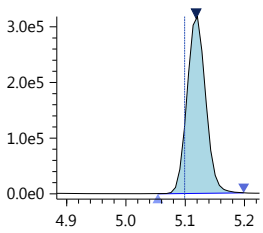
Conc 1.0518
RT 5.118 Area 696577
Q 563.00>518.90 (-) 3.18e5



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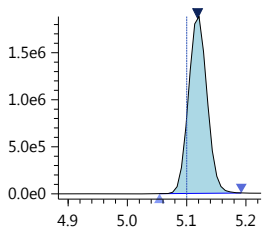
Conc 5.0000
RT 5.119 Area 4134275
ISTD 564.80>519.95 (-) 1.88e6



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RT 5.119 Area 4134275
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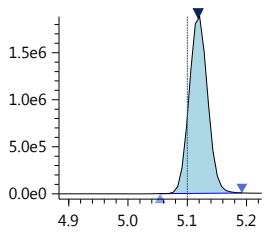

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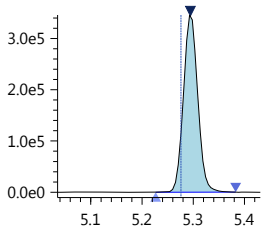

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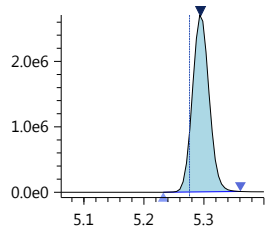
Q 614.80>569.95 (-) 2.71e6



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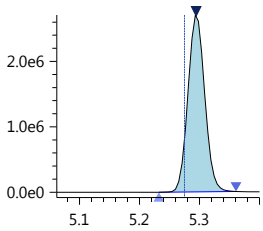
RT 5.294 Area 5261304
ISTD 614.80>569.95 (-) 2.71e6



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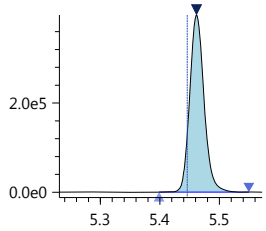

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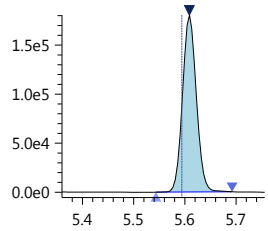

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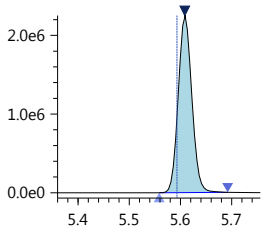

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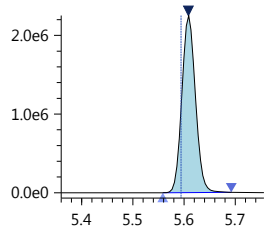

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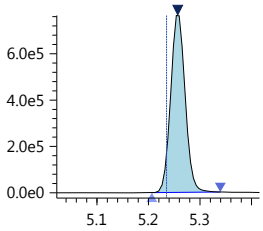

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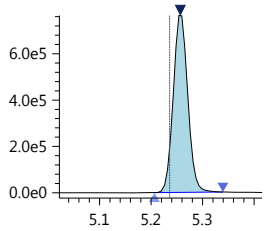

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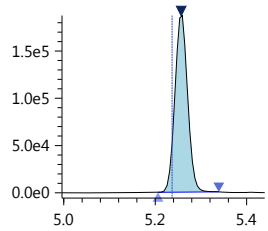

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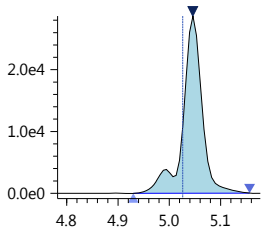

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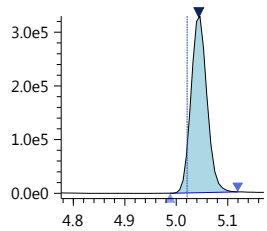
RT 5.044 Area 712024
Q 572.80>419.05 (-) 3.30e5



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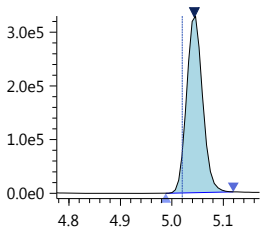

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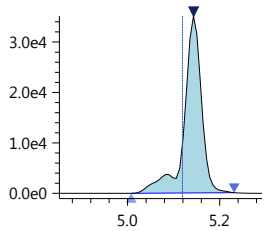

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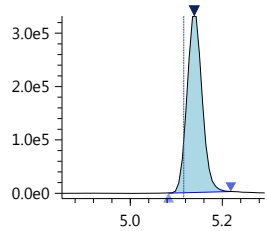
ISTD 588.80>419.00 (-) 3.32e5



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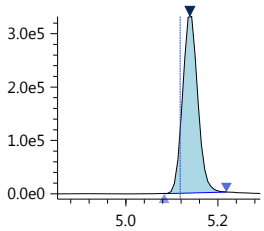

13C7-PFUnDA_IS
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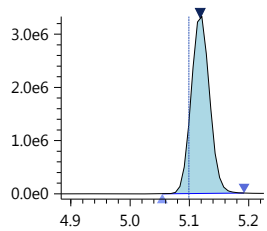

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Printed at 3/21/2019 9:16:10 AM

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PFBA-13C_IS
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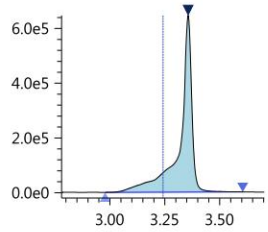

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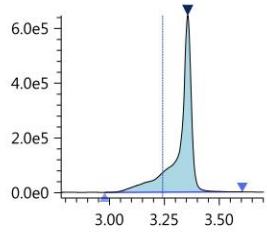

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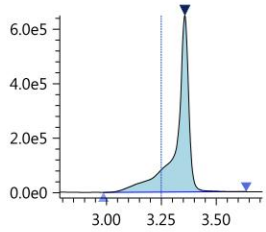

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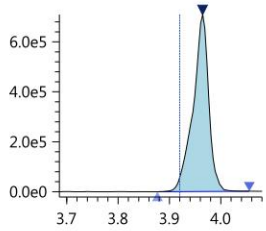

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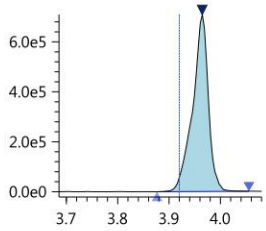
Q 267.90>223.00 (-) 7.10e5



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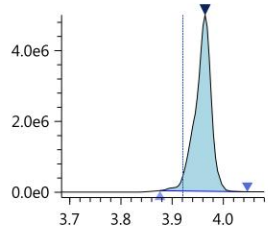

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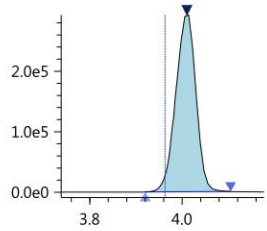
Conc 8.5731
RT 4.010 Area 890279
Q 299.00>80.00 (-) 2.93e5



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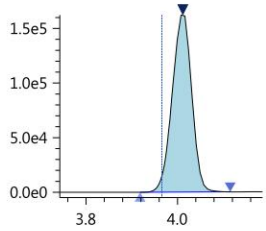
Conc 2.5463
RT 4.012 Area 483890
Q 301.80>80.00 (-) 1.62e5



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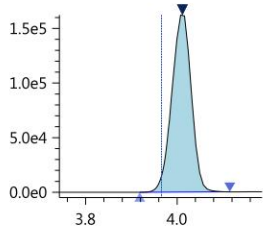
ISTD 301.80>80.00 (-) 1.62e5



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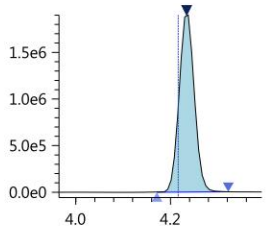

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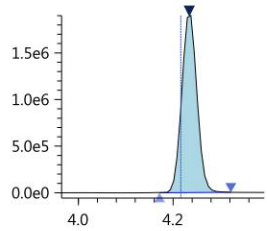

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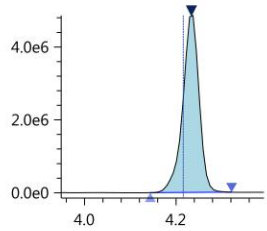

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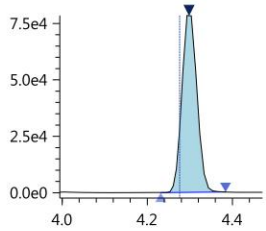
Q 329.00>169.00 (-) 7.85e4



HFPO_DA-13C_IS
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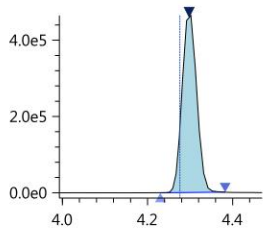
RT 4.298 Area 1128382
ISTD 332.00>286.80 (-) 4.65e5



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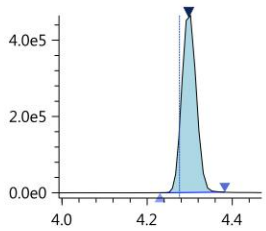

4_2-FTS-13C_IS
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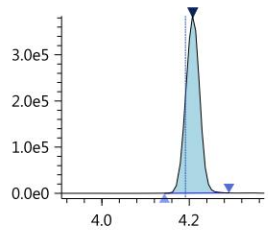

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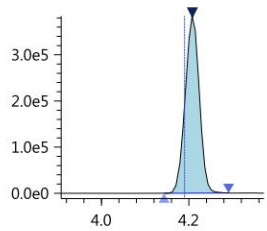

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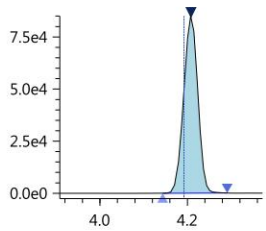

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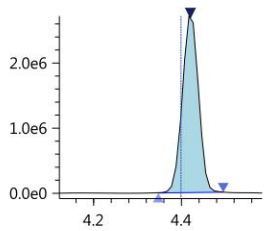
Q 362.90>319.00 (-) 2.72e6



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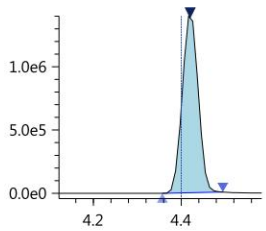

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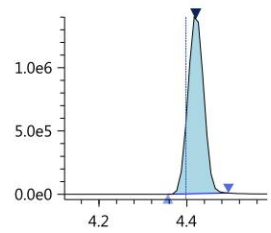

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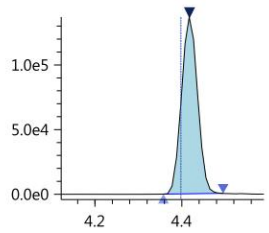

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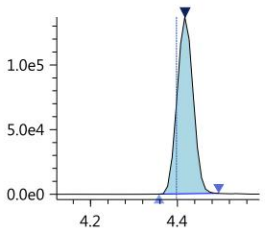
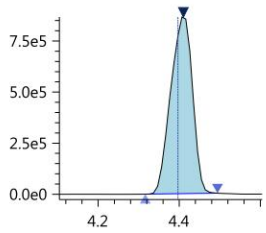
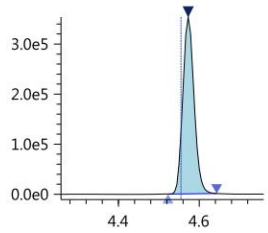


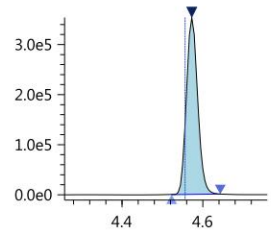
PFHxS_1
Conc 42.1894
RT 4.410 Area 3241509
Q 399.00>80.00 (-) 8.67e5



6_2-FTS-13C
Conc 4.6005
RT 4.573 Area 689114
Q 428.90>409.00 (-) 3.54e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.573 Area 689114
ISTD 428.90>409.00 (-) 3.54e5



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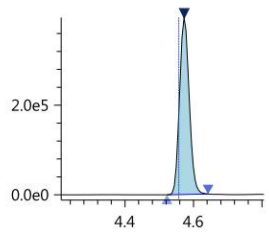
Conc 5.3606
RT 4.573 Area 781143
Q 427.00>407.00 (-) 3.96e5



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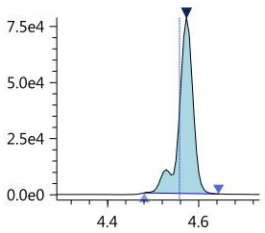
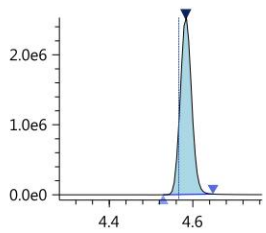
Conc 1.9436
RT 4.573 Area 168724
Q 449.00>80.15 (-) 7.90e4



PFOA-13C_IS
Conc 5.0000
RT 4.583 Area 4840457
ISTD 416.80>372.05 (-) 2.53e6



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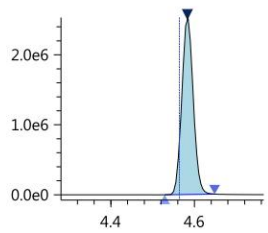
Q 416.80>372.05 (-) 2.53e6



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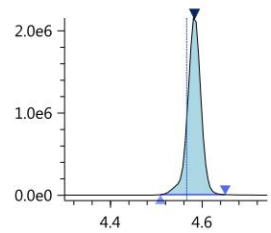
Q 413.00>369.00 (-) 2.16e6



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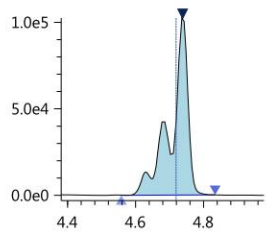

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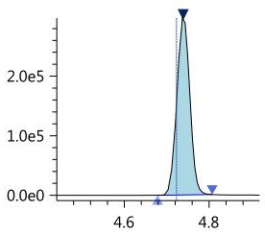
RT 4.739 Area 638357
ISTD 502.80>80.05 (-) 2.98e5



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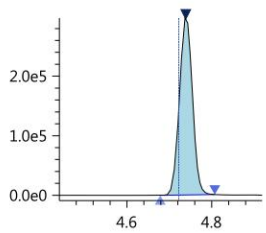

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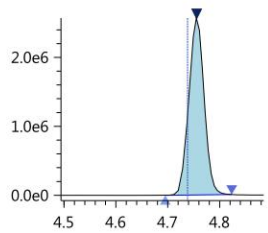
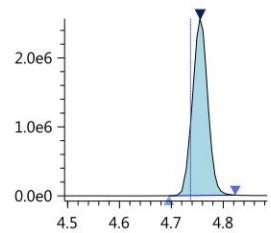
Conc 5.0000
RT 4.756 Area 5287807
ISTD 467.80>423.00 (-) 2.57e6



PFNA-13C
Conc 3.5461
RT 4.756 Area 5287807
Q 467.80>423.00 (-) 2.57e6



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Conc 2.0497
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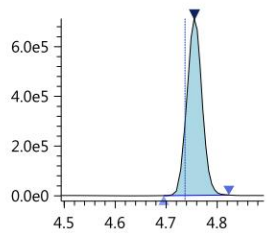
Q 463.00>418.90 (-) 7.13e5



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RT 4.940 Area 4942375
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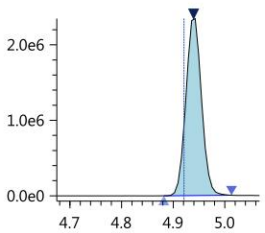

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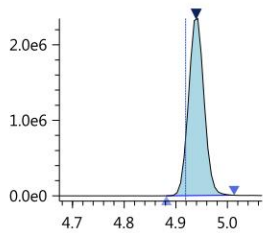

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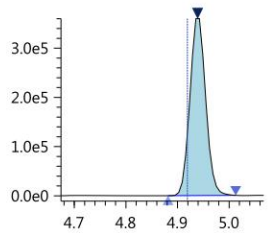
Q 513.00>468.80 (-) 3.60e5



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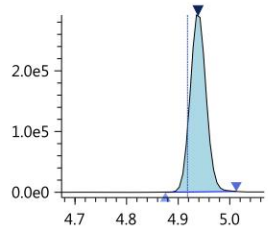
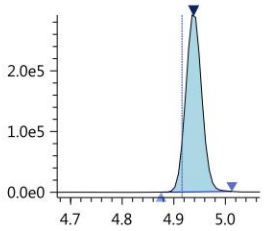
8_2-FTS-13C_IS
Conc 5.0000
RT 4.938 Area 638808
ISTD 528.80>509.00 (-) 2.92e5



8_2-FTS-13C
Conc 3.6553
RT 4.938 Area 638808
Q 528.80>509.00 (-) 2.92e5



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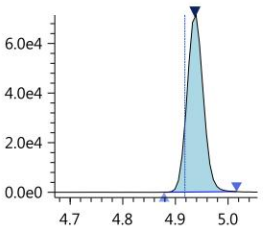
Q 527.10>506.90 (-) 7.15e4



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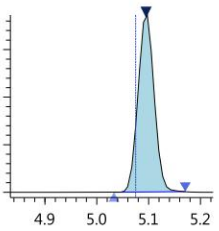
Q 599.00>79.90 (-) 3.73e4



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Conc 1.0518
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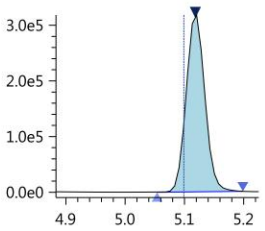

PFUnA-13C_IS
Conc 5.0000
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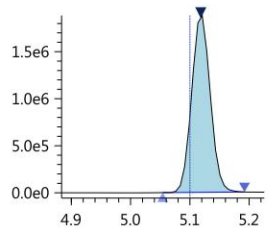
ISTD 564.80>519.95 (-) 1.88e6



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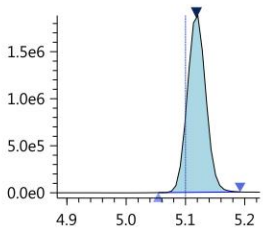
Q 564.80>519.95 (-) 1.88e6



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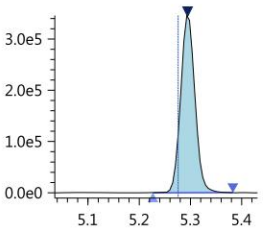
Conc 1.0586
RT 5.295 Area 672518
Q 613.05>569.00 (-) 3.46e5



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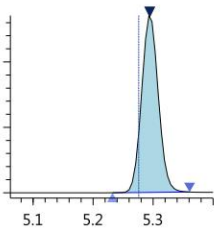
Conc 2.8538
RT 5.294 Area 5261304
Q 614.80>569.95 (-) 2.71e6



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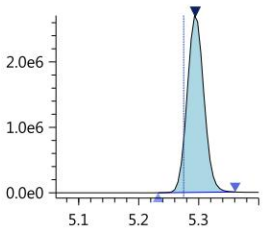
ISTD 614.80>569.95 (-) 2.71e6



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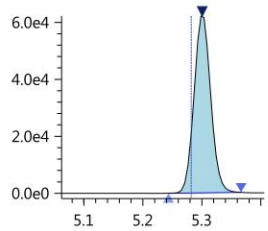
Conc 0.8368
RT 5.301 Area 122950
Q 627.00>606.95 (-) 6.22e4



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RT 5.461 Area 665895
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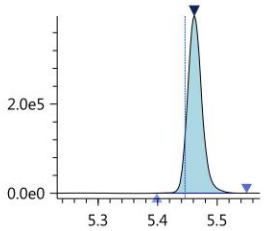

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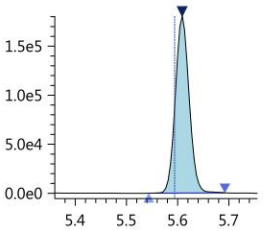
Conc 1.0425
RT 5.609 Area 338764
Q 713.40>669.00 (-) 1.81e5



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Conc 3.0398
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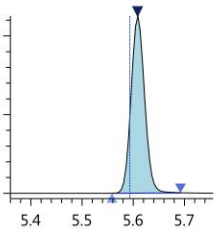
Q 714.70>669.90 (-) 2.25e6



PFTeDA-13C_IS
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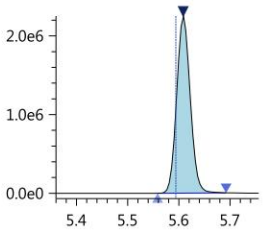
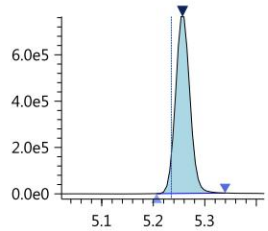
RT 5.608 Area 4149473
ISTD 714.70>669.90 (-) 2.25e6



FOSA-13C_IS
Conc 5.0000
RT 5.257 Area 1503208
ISTD 506.00>78.05 (-) 7.65e5



FOSA-13C
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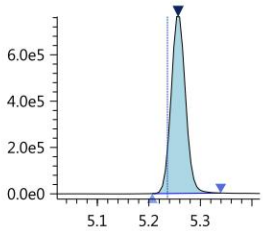
Q 506.00>78.05 (-) 7.65e5



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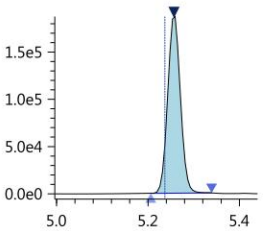
Conc 0.9185
RT 5.257 Area 362952
Q 498.20>78.00 (-) 1.88e5



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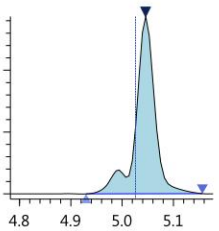
Conc 0.8460
RT 5.046 Area 74277
Q 570.20>419.00 (-) 2.87e4



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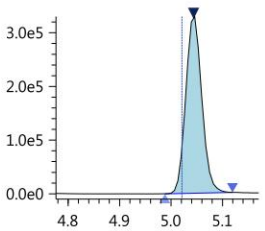
Conc 2.0605
RT 5.044 Area 712024
Q 572.80>419.05 (-) 3.30e5



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N-MeFOSAA-d3_IS
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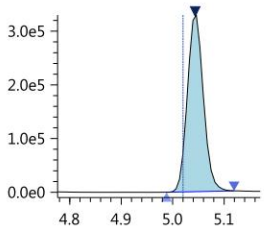
ISTD 572.80>419.05 (-) 3.30e5



N-MeFOSA-d3_IS
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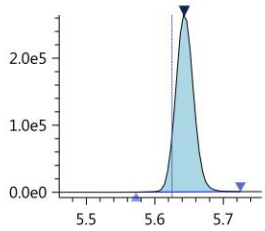
ISTD 514.90>168.90 (-) 2.64e5



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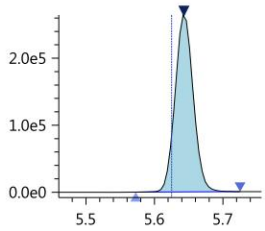
Q 514.90>168.90 (-) 2.64e5



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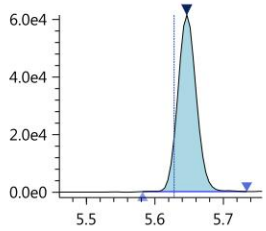
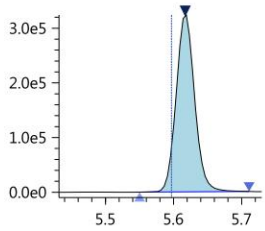
Q 512.00>169.10 (-) 6.15e4



N-MeFOSE-d7
Conc 3.3710
RT 5.617 Area 613429
Q 622.70>59.10 (-) 3.24e5



N-MeFOSE-d7_IS
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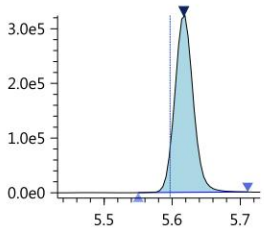
RT 5.617 Area 613429
ISTD 622.70>59.10 (-) 3.24e5



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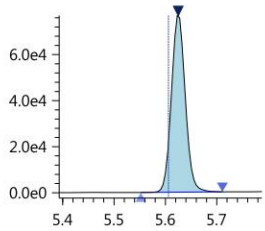
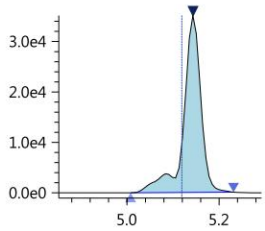
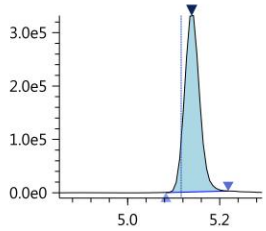
Conc 0.9146
RT 5.625 Area 144913
Q 616.00>59.00 (-) 7.70e4



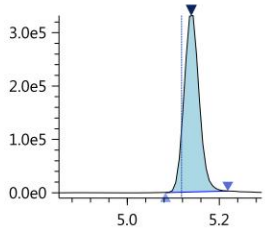
N-EtFOSAA
Conc 1.0261
RT 5.143 Area 92145
Q 584.20>418.95 (-) 3.52e4



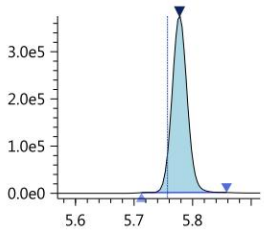
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.139 Area 768140
ISTD 588.80>419.00 (-) 3.32e5



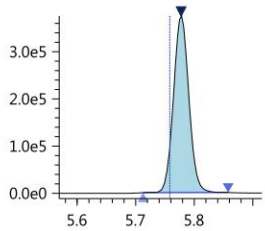
N-EtFOSAA-d5
Conc 2.2282
RT 5.139 Area 768140
Q 588.80>419.00 (-) 3.32e5



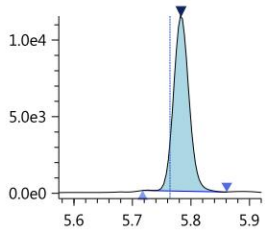
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.777 Area 682887
ISTD 530.90>169.15 (-) 3.76e5



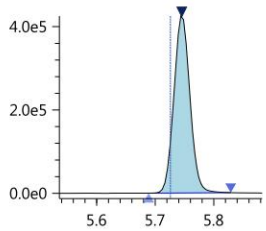
N-EtFOSA-d9
Conc 2.8661
RT 5.777 Area 682887
Q 530.90>169.15 (-) 3.76e5



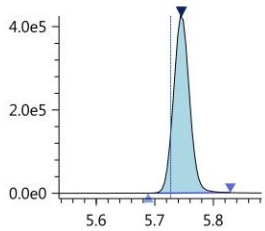
N-EtFOSA
Conc 0.9350
RT 5.783 Area 21283
Q 526.90>169.10 (-) 1.16e4



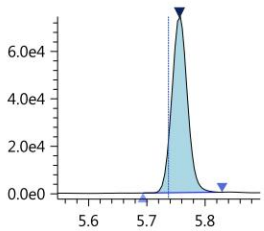
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.745 Area 813121
ISTD 638.70>59.10 (-) 4.26e5



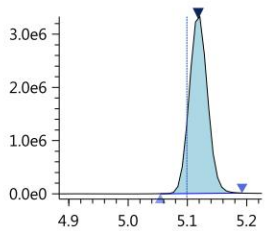
N-EtFOSE-d9
Conc 3.2373
RT 5.745 Area 813121
Q 638.70>59.10 (-) 4.26e5



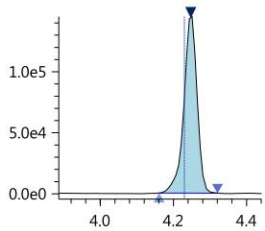
N-EtFOSE
Conc 0.9084
RT 5.756 Area 138399
Q 630.00>58.90 (-) 7.47e4



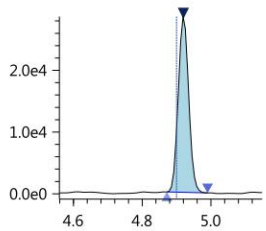
13C7-PFUnDA_IS
Conc 5.0000
RT 5.118 Area 7285240
ISTD 570.00>525.00 (-) 3.33e6



PFPeS
Conc 5.8175
RT 4.247 Area 364533
Q 349.00>99.00 (-) 1.45e5



PFNS
Conc 0.6732
RT 4.920 Area 60156
Q 549.00>99.00 (-) 2.87e4



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_028
Lab ID: KQ1903443-02
RunType: DMS
Matrix: Ground Water

Date Acquired: 3/19/19 14:40
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok
Above Highest ICAL Level	Perfluorohexane sulfonic acid (PFHxS)	3804173		1420175	Na for MS/DMS
	Perfluoropentanoic acid (PFPeA)	13151564		11838782	Na for MS/DMS
	Perfluorohexanoic acid (PFHxA)	14671910		14114959	Na for MS/DMS

Primary Review: _____

Printed: 3/21/19 10:05
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Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_028	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:40	**Vial:**	23
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1903443-02	**Raw Units:**	ng/mL

Bottle ID:	K1902064-010.01	**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**	333105	**Report Group:**	KQ1903443
Analysis	PFC/537M	**Prep Method:**	EPA 3535A		
		Prep Date:	3/18/19		

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.119	+0.01	7533842	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.011	0.00	481353	2.4493	49	20 - 109	Y
18O2-PFHxS	4.418	+0.01	330603	2.4456	49	26 - 122	Y
13C4-PFOS	4.747	+0.01	617204	3.8483	77	25 - 121	Y
13C4-PFBA	3.351	0.00	2265411	3.3767	68	27 - 124	Y
13C5-PFPeA	3.963	+0.00	1476942	3.3960	68	27 - 138	Y
13C2-PFHxA	4.233	+0.00	4153993	3.0974	62	28 - 132	Y
13C4-PFHpA	4.421	+0.01	3403479	2.4674	49	19 - 139	Y
13C4-PFOA	4.586	+0.01	4383059	3.1880	64	22 - 130	Y
13C5-PFNA	4.763	+0.01	5024243	3.2582	65	20 - 127	Y
13C2-PFDA	4.941	+0.01	4689214	3.2235	64	24 - 125	Y
13C2-PFUnDA	5.119	+0.01	3916317	2.9921	60	22 - 125	Y
13C2-PFDoDA	5.295	+0.01	5212417	2.7340	55	19 - 122	Y
13C2-PFTeDA	5.609	+0.01	4380188	3.1029	62	13 - 124	Y
13C8-FOSA	5.258	+0.01	1628408	3.3254	67	18 - 109	Y
D3-MeFOSAA	5.044	+0.01	759354	2.1250	43	9 - 123	Y
D5-EtFOSAA	5.139	+0.01	844618	2.3692	47	12 - 126	Y
13C2-6:2 FTS	4.575	+0.01	617447	3.9860	80	10 - 226	Y
13C2-8:2 FTS	4.939	+0.01	692110	3.8296	77	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	1104722	10.6942	290		Y
Perfluorohexane sulfonic acid (PFHxS)	4.411	+0.00	3804173	52.8728	1430	E	Y

1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_028	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 14:40	**Vial:**	23
Run Type:	DMS	**Dilution:**	1
Lab ID:	KQ1903443-02	**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)	4.576	+0.01	187655	2.3084	62.6		Y
Perfluorooctane sulfonic acid (PFOS)	4.747	+0.01	406017	4.8287	131		Y
Perfluorodecane sulfonic acid (PFDS)	5.095	+0.00	76256	0.7455	20.2		Y
Perfluorobutanoic acid (PFBA)	3.351	-0.01	3058833	7.1289	193		Y
Perfluoropentanoic acid (PFPeA)	3.963	+0.00	13151564	19.3048	524	E	Y
Perfluorohexanoic acid (PFHxA)	4.233	+0.00	14671910	19.7667	536	E	Y
Perfluoroheptanoic acid (PFHpA)	4.421	+0.01	8115381	15.1319	410		Y
Perfluorooctanoic acid (PFOA)	4.586	+0.01	4999725	6.8968	187		Y
Perfluorononanoic acid (PFNA)	4.763	+0.01	1684808	2.4444	66.3		Y
Perfluorodecanoic acid (PFDA)	4.941	+0.01	743343	0.9715	26.3		Y
Perfluoroundecanoic acid (PFUnDA)	5.119	+0.01	643980	1.0256	27.8		Y
Perfluorododecanoic acid (PFDoDA)	5.295	+0.01	669291	1.0634	28.8		Y
Perfluorotridecanoic acid (PFTrDA)	5.462	+0.01	689396	0.8683	23.5		Y
Perfluorotetradecanoic acid (PFTeDA)	5.608	+0.01	356176	1.0378	28.1		Y
Perfluorooctane sulfonamide (FOSA)	5.258	+0.01	381124	0.8903	24.1		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.046	+0.01	84409	0.9014	24.4		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.143	+0.01	91383	0.9254	25.1		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.575	+0.01	908230	6.9561	189		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.938	+0.01	158756	1.1994	32.5		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

Printed: 3/21/19 10:05

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_028

Sample ID: KQ1903443-02
Date acquired: 3/19/2019 2:40:10 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_028.lcd
Vial: 14 | Inj. Volume: 15.0000uL | Tray: 2

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.351	2265411	2265411	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.351	2265411	7533842	26	3.3767	ng/mL	----
PFBA	Auto	3.351	3058833	2265411	2	7.1289	ng/mL	----
PFPeA-13C_IS	Auto	3.963	1476942	1476942	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.963	1476942	7533842	26	3.3960	ng/mL	----
PFPeA	M	3.963	13151564	1476942	4	19.3048	ng/mL	----
PFBS_1	Auto	4.010	1104722	481353	16	10.6942	ng/mL	----
PFBS-13C	Auto	4.011	481353	7533842	26	2.4493	ng/mL	----
PFBS-13C_IS	Auto	4.011	481353	481353	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.233	4153993	4153993	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.233	4153993	7533842	26	3.0974	ng/mL	----
PFHxA	Auto	4.233	14671910	4153993	6	19.7667	ng/mL	----
PFHpA	Auto	4.421	8115381	3403479	8	15.1319	ng/mL	----
PFHpA-13C_IS	Auto	4.421	3403479	3403479	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.421	3403479	7533842	26	2.4674	ng/mL	----
PFHxS-18O_IS	Auto	4.418	330603	330603	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.418	330603	7533842	26	2.4456	ng/mL	----
PFHxS_1	Auto	4.411	3804173	330603	7	52.8728	ng/mL	----
6_2-FTS-13C	Auto	4.575	617447	7533842	26	3.9860	ng/mL	----
6_2-FTS-13C_IS	Auto	4.575	617447	617447	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.575	908230	617447	10	6.9561	ng/mL	----
PFHpS_1	M	4.576	187655	330603	7	2.3084	ng/mL	----
PFOA-13C_IS	Auto	4.586	4383059	4383059	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.586	4383059	7533842	26	3.1880	ng/mL	----
PFOA	Auto	4.586	4999725	4383059	9	6.8968	ng/mL	----
PFOS_1	Auto	4.747	406017	617204	13	4.8287	ng/mL	----
PFOS-13C_IS	Auto	4.747	617204	617204	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.747	617204	7533842	26	3.8483	ng/mL	----
PFNA-13C_IS	Auto	4.763	5024243	5024243	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.763	5024243	7533842	26	3.2582	ng/mL	----
PFNA	Auto	4.763	1684808	5024243	11	2.4444	ng/mL	----
PFDA-13C_IS	Auto	4.941	4689214	4689214	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.941	4689214	7533842	26	3.2235	ng/mL	----
PFDA	Auto	4.941	743343	4689214	12	0.9715	ng/mL	----
8_2-FTS-13C_IS	Auto	4.939	692110	692110	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.939	692110	7533842	26	3.8296	ng/mL	----
8_2-FTS_1	Auto	4.938	158756	692110	15	1.1994	ng/mL	----
PFUnA	Auto	5.119	643980	3916317	14	1.0256	ng/mL	----
PFUnA-13C_IS	Auto	5.119	3916317	3916317	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.119	3916317	7533842	26	2.9921	ng/mL	----
PFDoA	Auto	5.295	669291	5212417	17	1.0634	ng/mL	----
PFDoA-13C	Auto	5.295	5212417	7533842	26	2.7340	ng/mL	----
PFDoA-13C_IS	Auto	5.295	5212417	5212417	17	5.0000	ng/mL	----
PFTrDA	Auto	5.462	689396	4380188	22	0.8683	ng/mL	----
PFTeDA	Auto	5.608	356176	4380188	22	1.0378	ng/mL	----
PFTeDA-13C	Auto	5.609	4380188	7533842	26	3.1029	ng/mL	----
PFTeDA-13C_IS	Auto	5.609	4380188	4380188	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.258	1628408	1628408	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.258	1628408	7533842	26	3.3254	ng/mL	----
FOSA	Auto	5.258	381124	1628408	18	0.8903	ng/mL	----
N-MeFOSAA	Auto	5.046	84409	759354	19	0.9014	ng/mL	----
N-MeFOSAA-d3	Auto	5.044	759354	7533842	26	2.1250	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.044	759354	759354	19	5.0000	ng/mL	----
N-EtFOSAA	M	5.143	91383	844618	21	0.9254	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.139	844618	844618	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.139	844618	7533842	26	2.3692	ng/mL	----
13C7-PFUnDA_IS	Auto	5.119	7533842	7533842	26	5.0000	ng/mL	----

Insight Report

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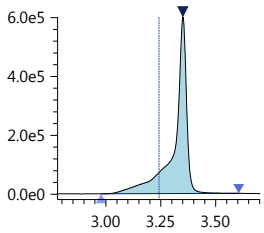
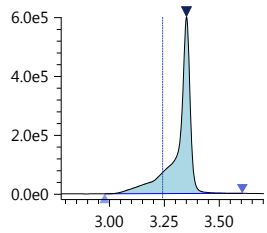
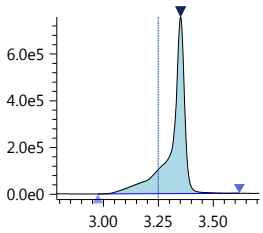
PFBA-13C_IS
Conc 5.0000
RT 3.351 Area 2265411
ISTD 216.90>172.15 (-) 6.02e5



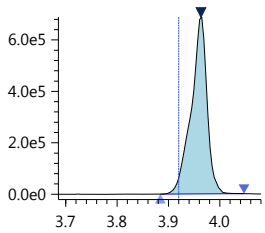
PFBA-13C
Conc 3.3767
RT 3.351 Area 2265411
Q 216.90>172.15 (-) 6.02e5



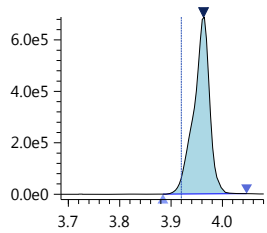
PFBA
Conc 7.1289
RT 3.351 Area 3058833
Q 213.00>169.10 (-) 7.59e5



PFPeA-13C_IS
Conc 5.0000
RT 3.963 Area 1476942
ISTD 267.90>223.00 (-) 6.89e5

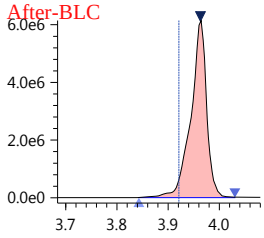


PFPeA-13C
Conc 3.3960
RT 3.963 Area 1476942
Q 267.90>223.00 (-) 6.89e5

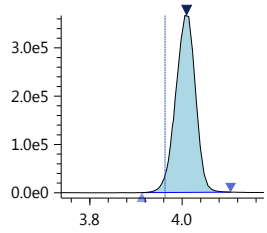


PFPeA
Conc 19.3048
RT 3.963 Area 13151564
Q 263.05>219.10 (-) 6.15e6

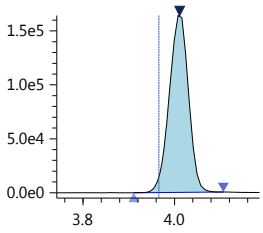
After-BLC



PFBS_1
Conc 10.6942
RT 4.010 Area 1104722
Q 299.00>80.00 (-) 3.67e5



PFBS-13C
Conc 2.4493
RT 4.011 Area 481353
Q 301.80>80.00 (-) 1.64e5



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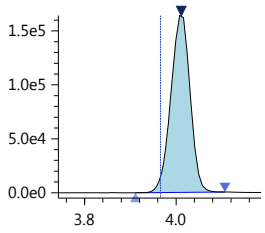
RT 4.011 Area 481353
ISTD 301.80>80.00 (-) 1.64e5



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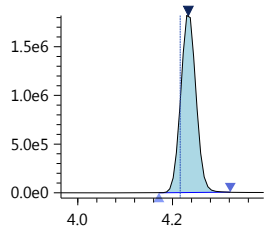
RT 4.233 Area 4153993
ISTD 314.90>270.10 (-) 1.82e6



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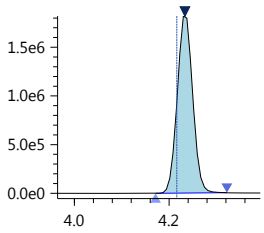
RT 4.233 Area 4153993
Q 314.90>270.10 (-) 1.82e6



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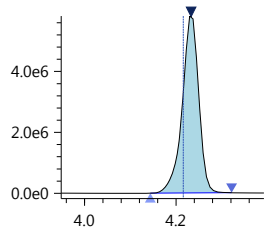
Conc 19.7667
RT 4.233 Area 14671910
Q 313.00>269.00 (-) 5.82e6



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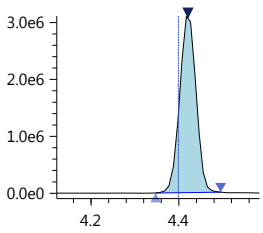
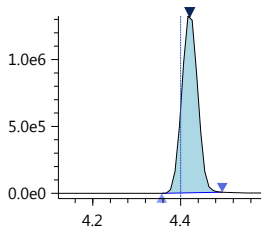
RT 4.421 Area 8115381
Q 362.90>319.00 (-) 3.11e6



PFHpA-13C_IS
Conc 5.0000
RT 4.421 Area 3403479
ISTD 366.90>322.10 (-) 1.33e6



PFHpA-13C
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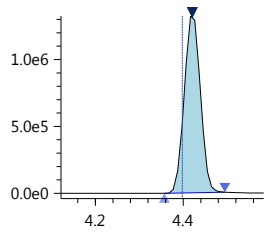
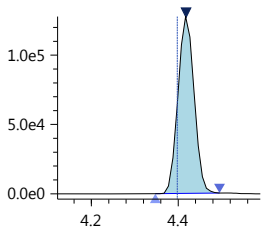
RT 4.421 Area 3403479
Q 366.90>322.10 (-) 1.33e6



PFHxS-18O_IS
Conc 5.0000
RT 4.418 Area 330603
ISTD 402.70>84.05 (-) 1.28e5



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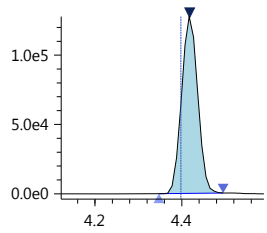
RT 4.418 Area 330603
Q 402.70>84.05 (-) 1.28e5



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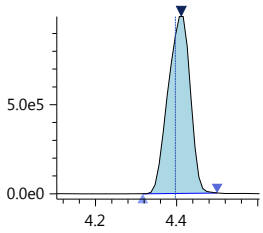
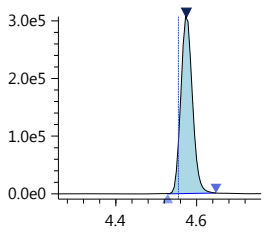
Conc 52.8728
RT 4.411 Area 3804173
Q 399.00>80.00 (-) 9.95e5



6_2-FTS-13C
Conc 3.9860
RT 4.575 Area 617447
Q 428.90>409.00 (-) 3.07e5



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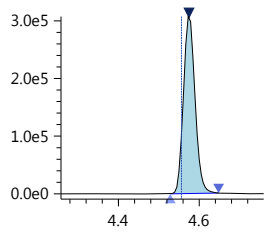
Conc 5.0000
RT 4.575 Area 617447
ISTD 428.90>409.00 (-) 3.07e5



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6_2-FTS_1
Conc 6.9561
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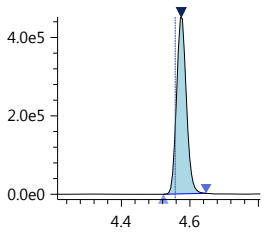
Q 427.00>407.00 (-) 4.52e5



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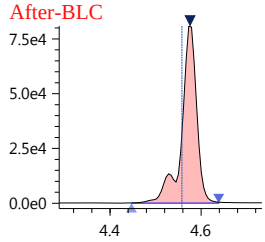
Conc 2.3084
RT 4.576 Area 187655
Q 449.00>80.15 (-) 8.09e4
After-BLC



PFOA-13C_IS
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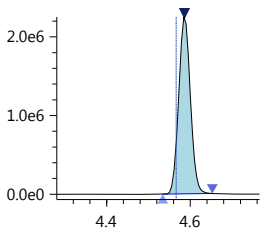
RT 4.586 Area 4383059
ISTD 416.80>372.05 (-) 2.25e6



PFOA-13C
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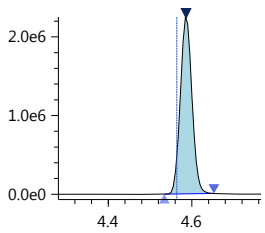
RT 4.586 Area 4383059
Q 416.80>372.05 (-) 2.25e6



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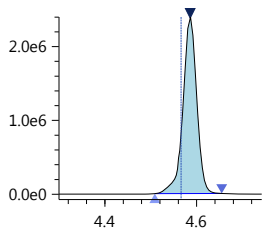
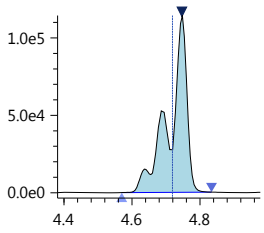
Q 413.00>369.00 (-) 2.40e6



PFOS_1
Conc 4.8287
RT 4.747 Area 406017
Q 499.00>80.00 (-) 1.14e5



PFOS-13C_IS
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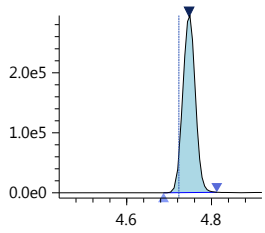
RT 4.747 Area 617204
ISTD 502.80>80.05 (-) 2.95e5



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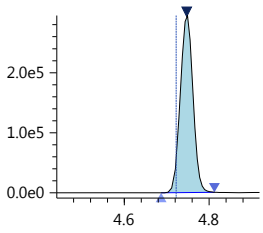

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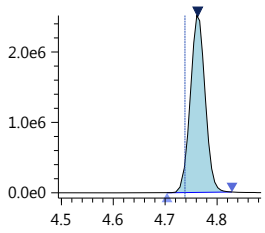
Conc 5.0000
RT 4.763 Area 5024243
ISTD 467.80>423.00 (-) 2.52e6



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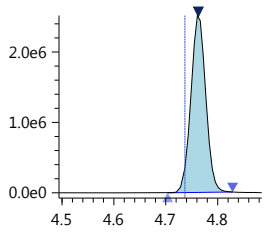
RT 4.763 Area 5024243
Q 467.80>423.00 (-) 2.52e6



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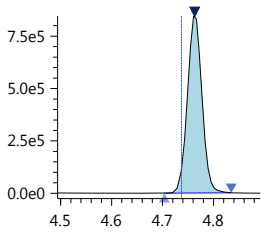
Conc 2.4444
RT 4.763 Area 1684808
Q 463.00>418.90 (-) 8.46e5



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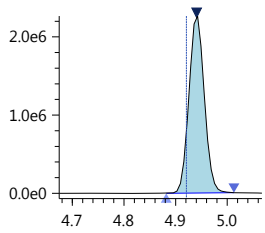
RT 4.941 Area 4689214
ISTD 514.80>469.95 (-) 2.27e6



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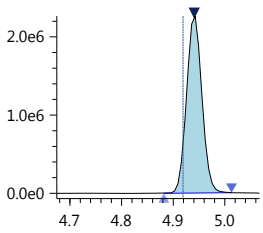
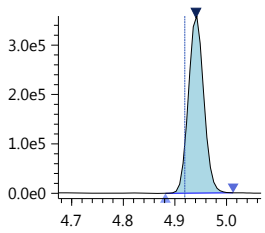
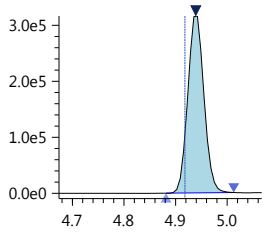
RT 4.941 Area 4689214
Q 514.80>469.95 (-) 2.27e6



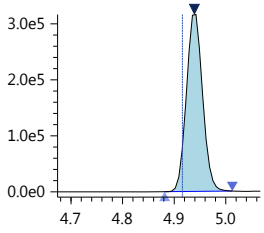
PFDA
Conc 0.9715
RT 4.941 Area 743343
Q 513.00>468.80 (-) 3.59e5



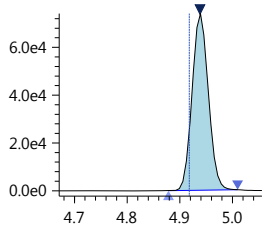
8_2-FTS-13C_IS
Conc 5.0000
RT 4.939 Area 692110
ISTD 528.80>509.00 (-) 3.17e5



8_2-FTS-13C
Conc 3.8296
RT 4.939 Area 692110
Q 528.80>509.00 (-) 3.17e5



8_2-FTS_1
Conc 1.1994
RT 4.938 Area 158756
Q 527.10>506.90 (-) 7.41e4



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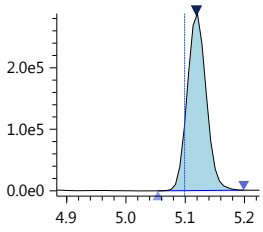
Conc 1.0256
RT 5.119 Area 643980
Q 563.00>518.90 (-) 2.88e5



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Conc 5.0000
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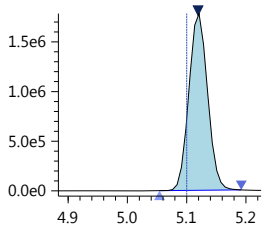
ISTD 564.80>519.95 (-) 1.79e6



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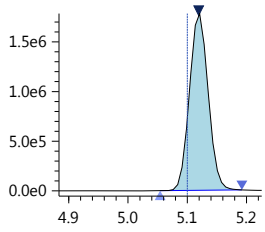
Q 564.80>519.95 (-) 1.79e6



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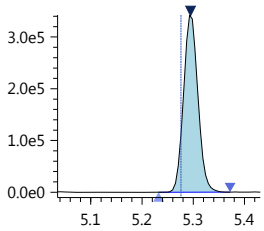
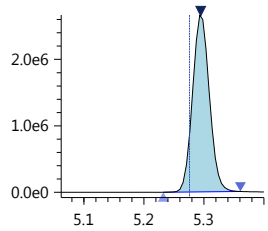
PFDoA
Conc 1.0634
RT 5.295 Area 669291
Q 613.05>569.00 (-) 3.43e5



PFDoA-13C
Conc 2.7340
RT 5.295 Area 5212417
Q 614.80>569.95 (-) 2.67e6



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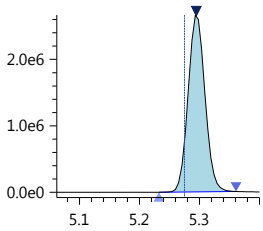
RT 5.295 Area 5212417
ISTD 614.80>569.95 (-) 2.67e6



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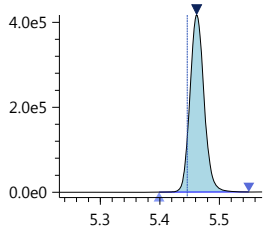
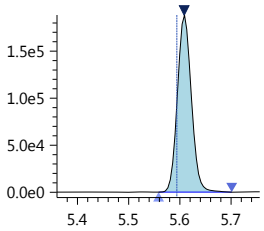
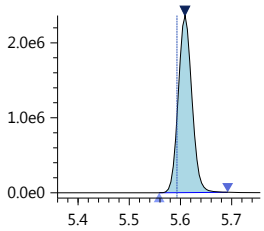
Conc 0.8683
RT 5.462 Area 689396
Q 663.00>618.90 (-) 4.17e5



PFTeDA
Conc 1.0378
RT 5.608 Area 356176
Q 713.40>669.00 (-) 1.88e5



PFTeDA-13C
Conc 3.1029
RT 5.609 Area 4380188
Q 714.70>669.90 (-) 2.36e6



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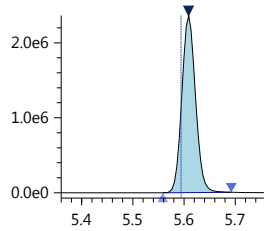
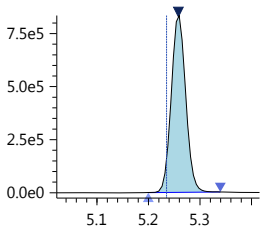
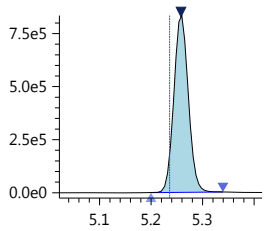
RT 5.609 Area 4380188
ISTD 714.70>669.90 (-) 2.36e6



FOSA-13C_IS
Conc 5.0000
RT 5.258 Area 1628408
ISTD 506.00>78.05 (-) 8.35e5



FOSA-13C
Conc 3.3254
RT 5.258 Area 1628408
Q 506.00>78.05 (-) 8.35e5



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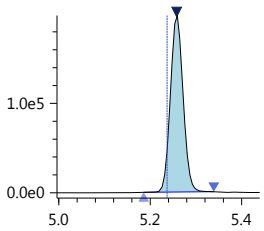
RT 5.258 Area 381124
Q 498.20>78.00 (-) 1.98e5



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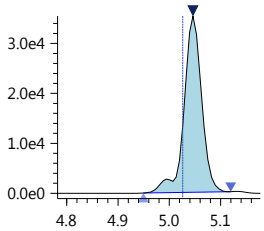
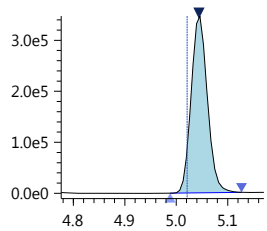
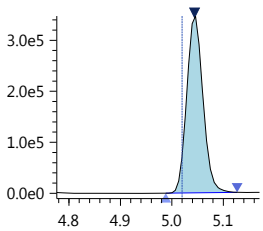
RT 5.046 Area 84409
Q 570.20>419.00 (-) 3.55e4



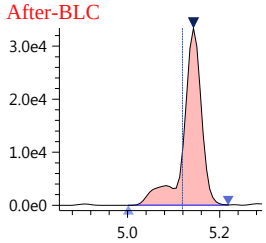
N-MeFOSAA-d3
Conc 2.1250
RT 5.044 Area 759354
Q 572.80>419.05 (-) 3.48e5



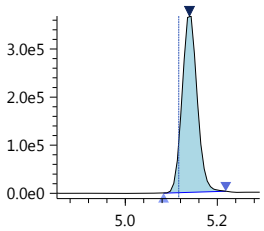
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.044 Area 759354
ISTD 572.80>419.05 (-) 3.48e5



N-EtFOSAA
Conc 0.9254
RT 5.143 Area 91383
Q 584.20>418.95 (-) 3.34e4
After-BLC



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.139 Area 844618
ISTD 588.80>419.00 (-) 3.69e5



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Conc 2.3692
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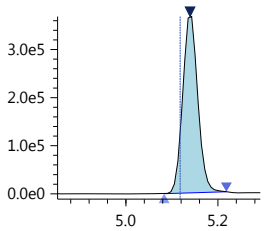
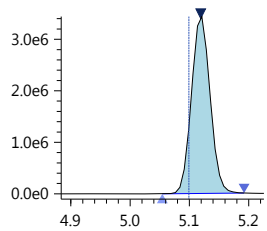
Q 588.80>419.00 (-) 3.69e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.119 Area 7533842
ISTD 570.00>525.00 (-) 3.44e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_028

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Acquired by: System Administrator
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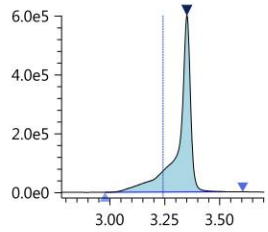

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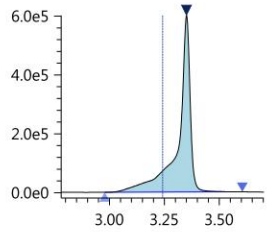

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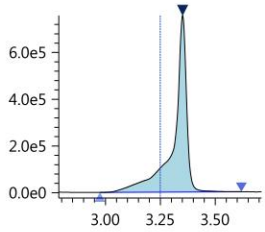
Q 213.00>169.10 (-) 7.59e5



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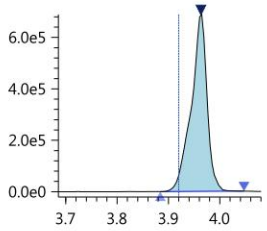
Conc 5.0000
RT 3.963 Area 1476942
ISTD 267.90>223.00 (-) 6.89e5



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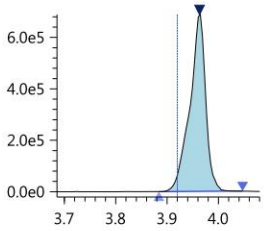
Q 267.90>223.00 (-) 6.89e5



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Conc 18.7919
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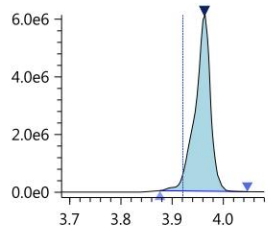
Q 263.05>219.10 (-) 6.15e6



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Conc 10.6942
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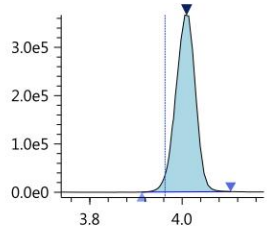
Q 299.00>80.00 (-) 3.67e5



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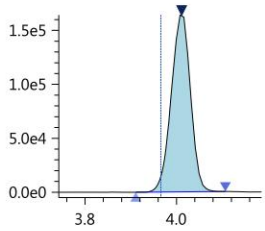
RT 4.011 Area 481353
Q 301.80>80.00 (-) 1.64e5



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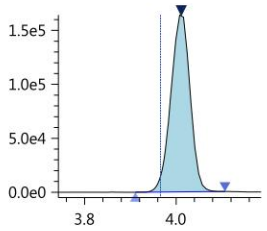

PFHxA-13C_IS
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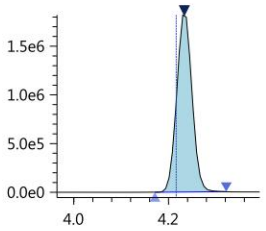
RT 4.233 Area 4153993
ISTD 314.90>270.10 (-) 1.82e6



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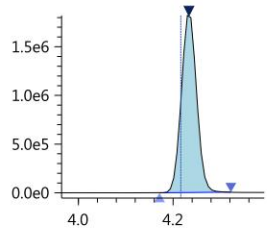

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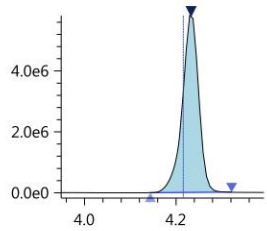
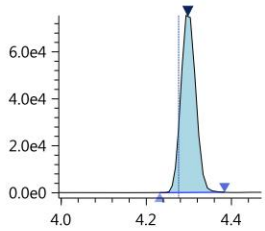


HPFO_DA
Conc 0.7787
RT 4.298 Area 187583
Q 329.00>169.00 (-) 7.55e4



HFPO_DA-13C_IS
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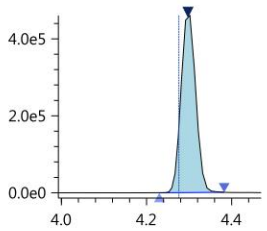
RT 4.298 Area 1122587
ISTD 332.00>286.80 (-) 4.61e5



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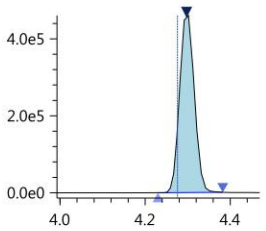
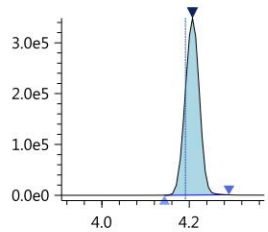


4_2-FTS-13C_IS
Conc 5.0000
RT 4.207 Area 794988
ISTD 328.80>309.05 (-) 3.49e5



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Conc 4.5402
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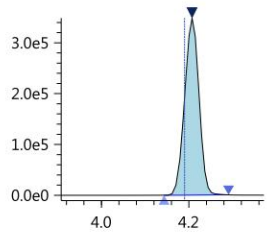
Q 328.80>309.05 (-) 3.49e5



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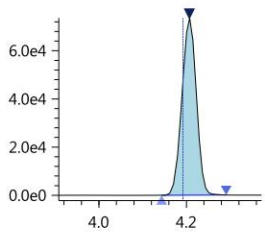
RT 4.207 Area 168619
Q 327.00>307.05 (-) 7.36e4



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Conc 15.1319
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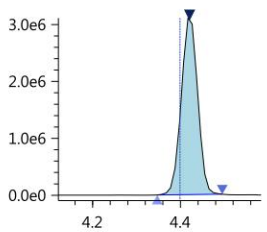
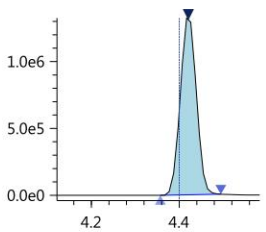
Q 362.90>319.00 (-) 3.11e6



PFHpA-13C_IS
Conc 5.0000
RT 4.421 Area 3403479
ISTD 366.90>322.10 (-) 1.33e6



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PFHpA-13C
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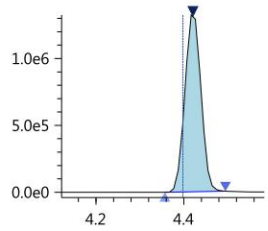
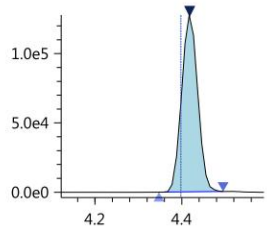
Q 366.90>322.10 (-) 1.33e6



PFHxS-18O_IS
Conc 5.0000
RT 4.418 Area 330603
ISTD 402.70>84.05 (-) 1.28e5



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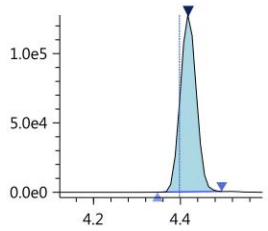

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Conc 52.8728
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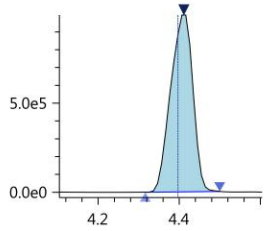
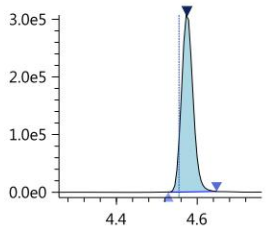
Q 399.00>80.00 (-) 9.95e5



6_2-FTS-13C
Conc 3.9860
RT 4.575 Area 617447
Q 428.90>409.00 (-) 3.07e5



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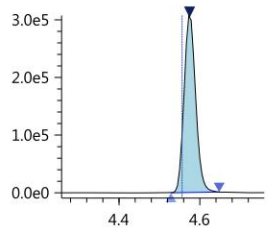
ISTD 428.90>409.00 (-) 3.07e5



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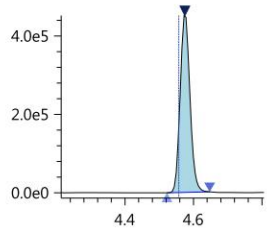

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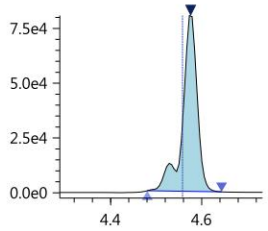

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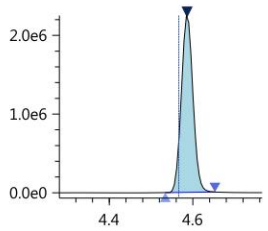
RT 4.586 Area 4383059
ISTD 416.80>372.05 (-) 2.25e6



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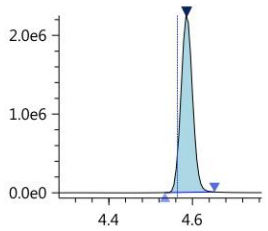
Q 416.80>372.05 (-) 2.25e6



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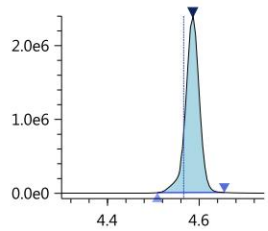
Q 413.00>369.00 (-) 2.40e6



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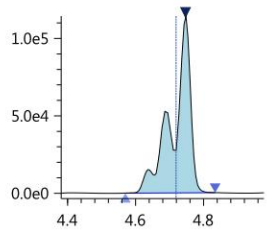
Q 499.00>80.00 (-) 1.14e5



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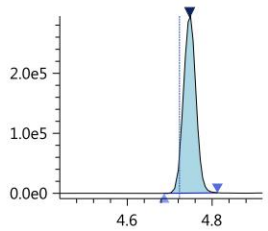

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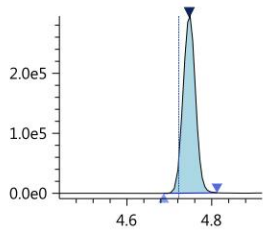

PFNA-13C_IS
Conc 5.0000
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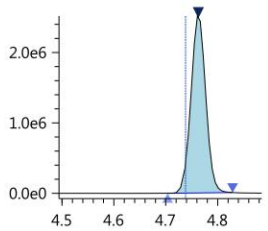
ISTD 467.80>423.00 (-) 2.52e6



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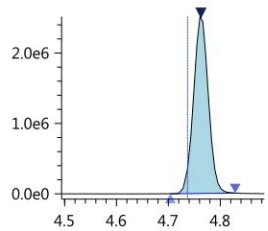
RT 4.763 Area 5024243
Q 467.80>423.00 (-) 2.52e6



PFNA
Conc 2.4444
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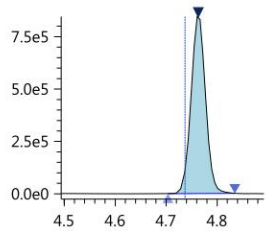
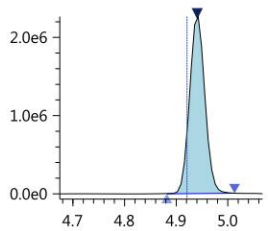
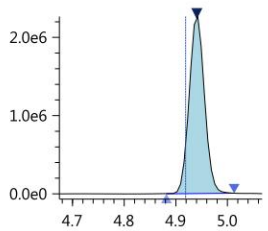
Q 463.00>418.90 (-) 8.46e5



PFDA-13C_IS
Conc 5.0000
RT 4.941 Area 4689214
ISTD 514.80>469.95 (-) 2.27e6



PFDA-13C
Conc 3.2235
RT 4.941 Area 4689214
Q 514.80>469.95 (-) 2.27e6



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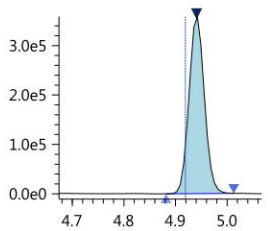
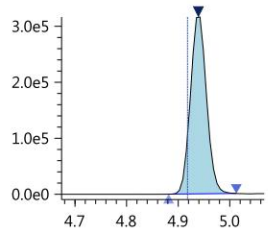
Conc 0.9715
RT 4.941 Area 743343
Q 513.00>468.80 (-) 3.59e5

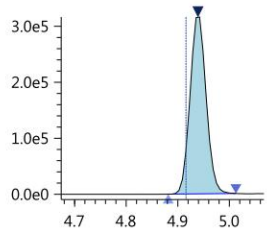


Insight Report

8_2-FTS-13C_IS
Conc 5.0000
RT 4.939 Area 692110
ISTD 528.80>509.00 (-) 3.17e5



8_2-FTS-13C
Conc 3.8296
RT 4.939 Area 692110
Q 528.80>509.00 (-) 3.17e5



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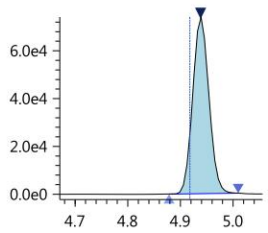
Conc 1.1994
RT 4.938 Area 158756
Q 527.10>506.90 (-) 7.41e4



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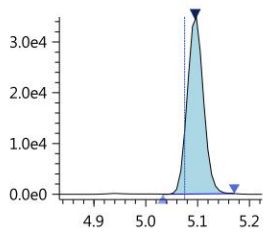
Conc 0.7455
RT 5.095 Area 76256
Q 599.00>79.90 (-) 3.49e4



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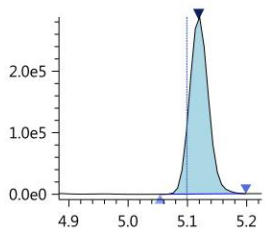
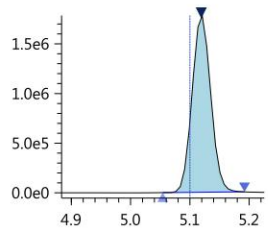
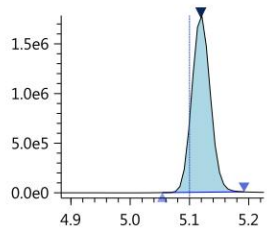
Conc 1.0256
RT 5.119 Area 643980
Q 563.00>518.90 (-) 2.88e5



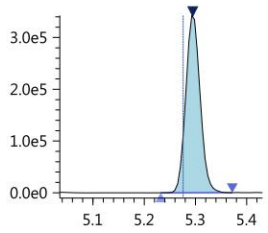
PFUnA-13C_IS
Conc 5.0000
RT 5.119 Area 3916317
ISTD 564.80>519.95 (-) 1.79e6



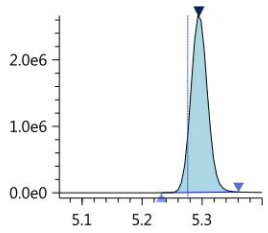
PFUnA-13C
Conc 2.9921
RT 5.119 Area 3916317
Q 564.80>519.95 (-) 1.79e6



PFDoA
Conc 1.0634
RT 5.295 Area 669291
Q 613.05>569.00 (-) 3.43e5



PFDoA-13C
Conc 2.7340
RT 5.295 Area 5212417
Q 614.80>569.95 (-) 2.67e6



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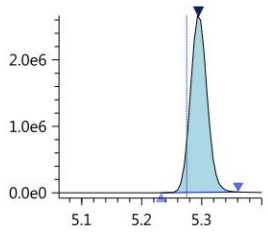

10_2-FtS_1
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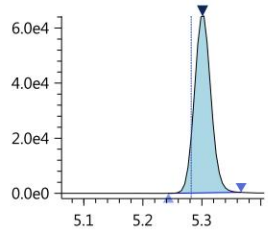
RT 5.301 Area 127318
Q 627.00>606.95 (-) 6.44e4



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Conc 0.8683
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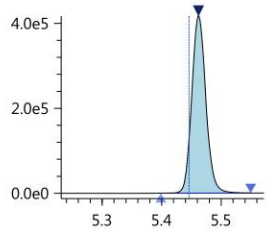

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Conc 1.0378
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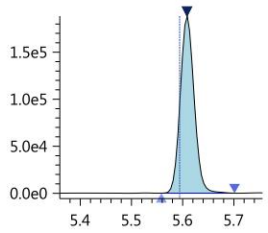
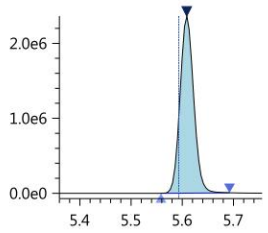
Q 713.40>669.00 (-) 1.88e5



PFTeDA-13C
Conc 3.1029
RT 5.609 Area 4380188
Q 714.70>669.90 (-) 2.36e6



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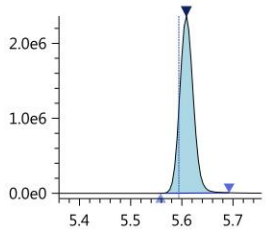
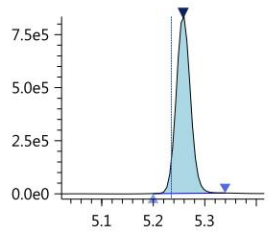
RT 5.609 Area 4380188
ISTD 714.70>669.90 (-) 2.36e6



FOSA-13C_IS
Conc 5.0000
RT 5.258 Area 1628408
ISTD 506.00>78.05 (-) 8.35e5



FOSA-13C
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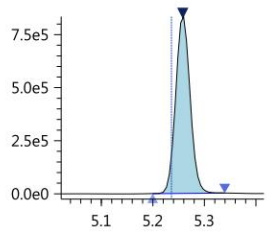

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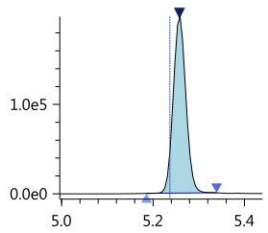
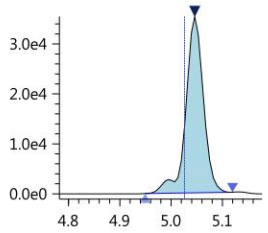
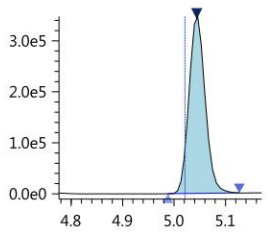
Q 498.20>78.00 (-) 1.98e5



N-MeFOSAA
Conc 0.9014
RT 5.046 Area 84409
Q 570.20>419.00 (-) 3.55e4



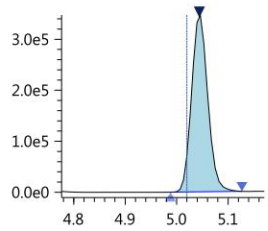
N-MeFOSAA-d3
Conc 2.1250
RT 5.044 Area 759354
Q 572.80>419.05 (-) 3.48e5



Insight Report

Printed at 3/21/2019 9:16:10 AM

N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.044 Area 759354
ISTD 572.80>419.05 (-) 3.48e5



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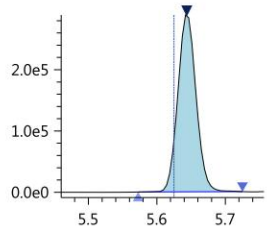
ISTD 514.90>168.90 (-) 2.89e5



N-MeFOSA-d3
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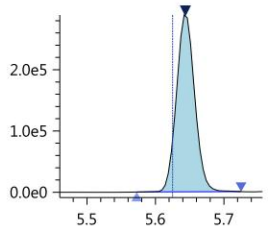

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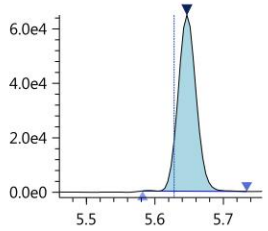
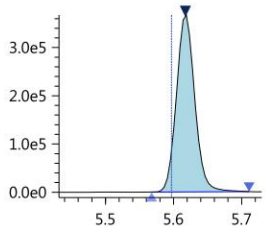


N-MeFOSE-d7
Conc 3.6634
RT 5.617 Area 689385
Q 622.70>59.10 (-) 3.67e5



N-MeFOSE-d7_IS
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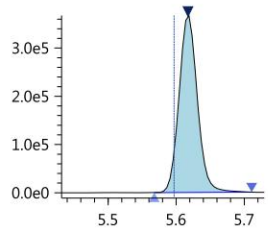
RT 5.617 Area 689385
ISTD 622.70>59.10 (-) 3.67e5



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Conc 0.8395
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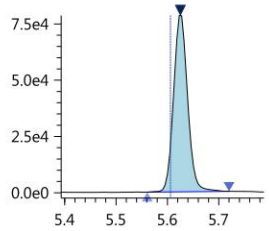
Q 616.00>59.00 (-) 7.87e4



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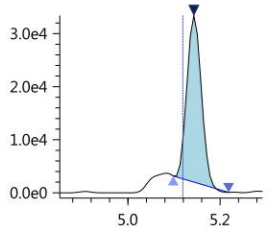
RT 5.143 Area 68296
Q 584.20>418.95 (-) 3.34e4



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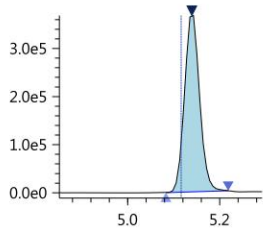
ISTD 588.80>419.00 (-) 3.69e5



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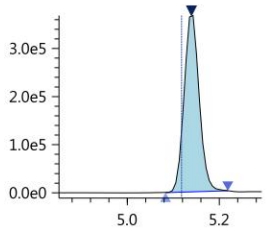

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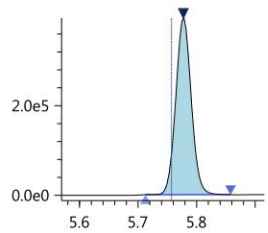

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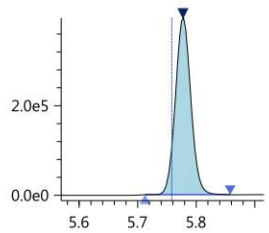

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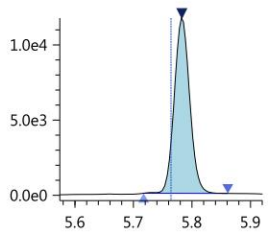

N-EtFOSE-d9_IS
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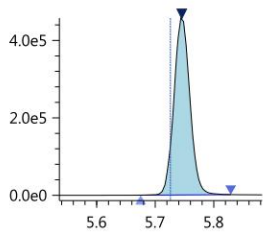
ISTD 638.70>59.10 (-) 4.58e5



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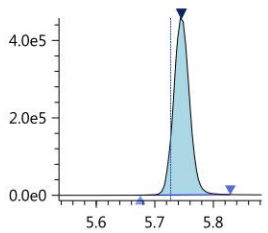
Q 638.70>59.10 (-) 4.58e5



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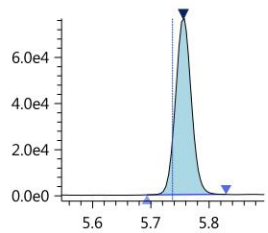
Q 630.00>58.90 (-) 7.69e4



13C7-PFUnDA_IS
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RT 5.119 Area 7533842
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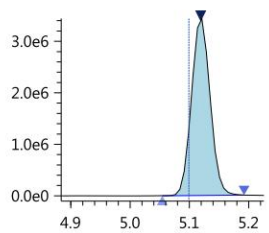
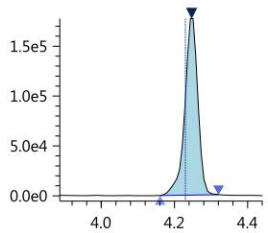


PFPeS
Conc 7.0677
RT 4.247 Area 440553
Q 349.00>99.00 (-) 1.78e5



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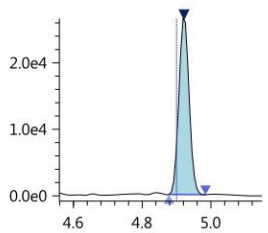
Conc 0.6438
RT 4.922 Area 55623
Q 549.00>99.00 (-) 2.67e4



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_014
Lab ID: KQ1903668-02
RunType: CCB
Matrix: Ground Water

Date Acquired: 3/19/19 12:13
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	D3-MeFOSAA	67	70	130	Native ok
Surrogates	13C3-PFBS	113	20	109	High bias ND

Primary Review: _____

Printed: 3/21/19 10:05
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

Secondary Review: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_014	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:13	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1903668-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/4/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**		**Report Group:**	KQ1903668
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.121	+0.01	6070444	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec		% Rec Criteria	Rpt?
13C3-PFBS	4.014	+0.00	891076	5.6273	113	*	20 - 109	Y
18O2-PFHxS	4.412	+0.00	631288	5.7957	116		26 - 122	Y
13C4-PFOS	4.734	+0.00	757261	5.8599	117		25 - 121	Y
13C4-PFBA	3.357	+0.00	2840982	5.2554	105		27 - 124	Y
13C5-PFPeA	3.962	+0.00	1824632	5.2069	104		27 - 138	Y
13C2-PFHxA	4.229		5405472	5.0021	100		28 - 132	Y
13C4-PFHpA	4.413	+0.00	5644251	5.0784	102		19 - 139	Y
13C4-PFOA	4.579	+0.00	5993106	5.4098	108		22 - 130	Y
13C5-PFNA	4.750	+0.00	6969567	5.6093	112		20 - 127	Y
13C2-PFDA	4.932	+0.00	6241562	5.3250	107		24 - 125	Y
13C2-PFUnDA	5.122	+0.01	5430662	5.1493	103		22 - 125	Y
13C2-PFDoDA	5.293	+0.01	7841515	5.1045	102		19 - 122	Y
13C2-PFTeDA	5.605	+0.00	5686716	4.9996	100		13 - 124	Y
13C8-FOSA	5.252	+0.01	1935026	4.9042	98		18 - 109	Y
D3-MeFOSAA	5.040	+0.00	972194	3.3765	68		9 - 123	Y
D5-EtFOSAA	5.139	+0.01	1163387	4.0501	81		12 - 126	Y
13C2-6:2 FTS	4.570	+0.00	853461	6.8379	137		10 - 226	Y
13C2-8:2 FTS	4.930	+0.00	792324	5.4409	109		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		282	0.0015	0.048	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.395	-0.02	1286	0.0094	0.30	U	Y

1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_014	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:13	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1903668-02	**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)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.738	+0.01	607	0.0059	0.19	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.962	+0.00	110171	0.0050	0.16	U	Y
Perfluorohexanoic acid (PFHxA)	4.215	-0.01	30141	-0.0039	0	U	Y
Perfluoroheptanoic acid (PFHpA)	4.401	-0.01	26838	-0.0097	0	U	Y
Perfluorooctanoic acid (PFOA)	4.566	-0.01	28983	0.0040	0.13	U	Y
Perfluorononanoic acid (PFNA)	4.726	-0.02	20057	0.0043	0.14	U	Y
Perfluorodecanoic acid (PFDA)	4.909	-0.02	19400	0.0190	0.61	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.110	0.00	28401	-0.0063	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.284	0.00	14889	0.0056	0.18	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.447	-0.01	14180	-0.0002	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.605	+0.00	50870	-0.0100	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.250	+0.00	1268	0.0025	0.080	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.049	+0.01	1140	0.0095	0.30	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.573	+0.01	201	0.0011	0.035	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.931	+0.00	82	0.0005	0.016	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

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Insight Report

Printed at 3/21/2019 9:48:23 AM

190319_014

Sample ID: IB
Date acquired: 3/19/2019 12:13:43 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_014.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.357	2840982	2840982	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.357	2840982	6070444	26	5.2554	ng/mL	----
PFBA	ND(W/B)	----	----	2840982	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.962	1824632	1824632	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.962	1824632	6070444	26	5.2069	ng/mL	----
PFPeA	Auto	3.962	110171	1824632	4	0.0050	ng/mL	----
PFBS_1	Auto	4.011	282	891076	16	0.0015	ng/mL	----
PFBS-13C	Auto	4.014	891076	6070444	26	5.6273	ng/mL	----
PFBS-13C_IS	Auto	4.014	891076	891076	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.229	5405472	5405472	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.229	5405472	6070444	26	5.0021	ng/mL	----
PFHxA	Auto	4.215	30141	5405472	6	-0.0039	ng/mL	----
PFHpA	Auto	4.401	26838	5644251	8	-0.0097	ng/mL	----
PFHpA-13C_IS	Auto	4.413	5644251	5644251	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.413	5644251	6070444	26	5.0784	ng/mL	----
PFHxS-18O_IS	Auto	4.412	631288	631288	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.412	631288	6070444	26	5.7957	ng/mL	----
PFHxS_1	Auto	4.395	1286	631288	7	0.0094	ng/mL	----
6_2-FTS-13C	Auto	4.570	853461	6070444	26	6.8379	ng/mL	----
6_2-FTS-13C_IS	Auto	4.570	853461	853461	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.573	201	853461	10	0.0011	ng/mL	----
PFHpS_1	ND(W/B)	----	----	631288	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.579	5993106	5993106	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.579	5993106	6070444	26	5.4098	ng/mL	----
PFOA	M	4.566	28983	5993106	9	0.0040	ng/mL	----
PFOS_1	Auto	4.738	607	757261	13	0.0059	ng/mL	----
PFOS-13C_IS	Auto	4.734	757261	757261	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.734	757261	6070444	26	5.8599	ng/mL	----
PFNA-13C_IS	Auto	4.750	6969567	6969567	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.750	6969567	6070444	26	5.6093	ng/mL	----
PFNA	Auto	4.726	20057	6969567	11	0.0043	ng/mL	----
PFDA-13C_IS	Auto	4.932	6241562	6241562	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.932	6241562	6070444	26	5.3250	ng/mL	----
PFDA	Auto	4.909	19400	6241562	12	0.0190	ng/mL	----
8_2-FTS-13C_IS	Auto	4.930	792324	792324	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.930	792324	6070444	26	5.4409	ng/mL	----
8_2-FTS_1	Auto	4.931	82	792324	15	0.0005	ng/mL	----
PFUnA	Auto	5.110	28401	5430662	14	-0.0063	ng/mL	----
PFUnA-13C_IS	Auto	5.122	5430662	5430662	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.122	5430662	6070444	26	5.1493	ng/mL	----
PFDoA	M	5.284	14889	7841515	17	0.0056	ng/mL	----
PFDoA-13C	Auto	5.293	7841515	6070444	26	5.1045	ng/mL	----
PFDoA-13C_IS	Auto	5.293	7841515	7841515	17	5.0000	ng/mL	----
PFTrDA	Auto	5.447	14180	5686716	22	-0.0002	ng/mL	----
PFTeDA	Auto	5.605	50870	5686716	22	-0.0100	ng/mL	----
PFTeDA-13C	Auto	5.605	5686716	6070444	26	4.9996	ng/mL	----
PFTeDA-13C_IS	Auto	5.605	5686716	5686716	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.252	1935026	1935026	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.252	1935026	6070444	26	4.9042	ng/mL	----
FOSA	Auto	5.250	1268	1935026	18	0.0025	ng/mL	----
N-MeFOSAA	Auto	5.049	1140	972194	19	0.0095	ng/mL	----
N-MeFOSAA-d3	Auto	5.040	972194	6070444	26	3.3765	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.040	972194	972194	19	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	1163387	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.139	1163387	1163387	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.139	1163387	6070444	26	4.0501	ng/mL	----
13C7-PFUnDA_IS	Auto	5.121	6070444	6070444	26	5.0000	ng/mL	----

Insight Report

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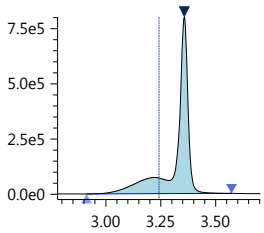
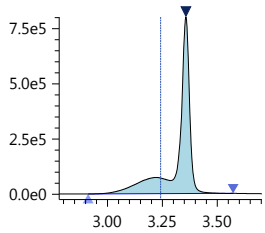
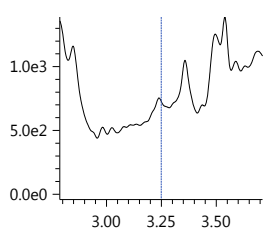
PFBA-13C_IS
Conc 5.0000
RT 3.357 Area 2840982
ISTD 216.90>172.15 (-) 8.03e5



PFBA-13C
Conc 5.2554
RT 3.357 Area 2840982
Q 216.90>172.15 (-) 8.03e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.39e3



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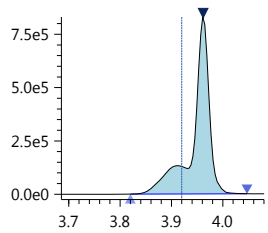

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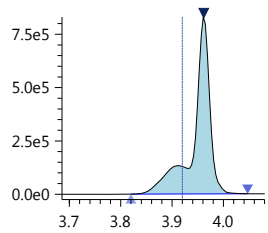

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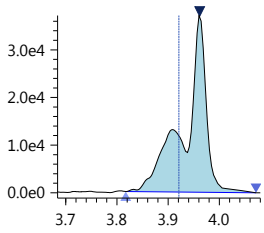
Q 263.05>219.10 (-) 3.72e4



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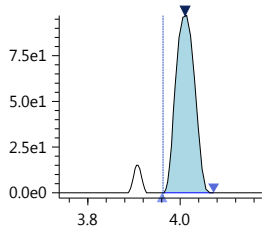
RT 4.011 Area 282
Q 299.00>80.00 (-) 9.70e1



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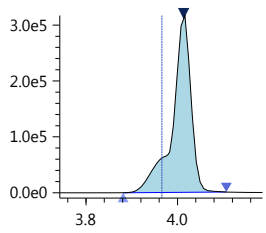

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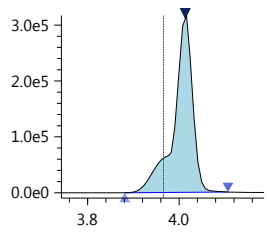

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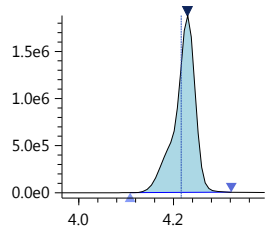

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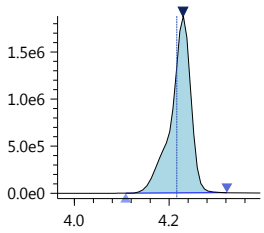

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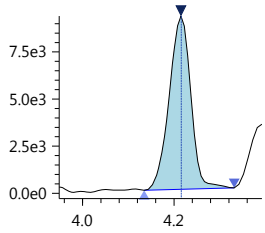
Q 313.00>269.00 (-) 9.41e3



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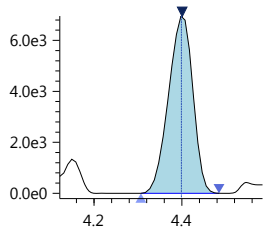
Q 362.90>319.00 (-) 6.96e3



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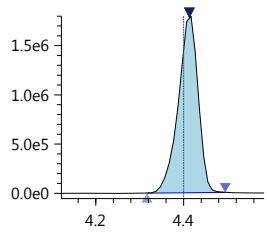
ISTD 366.90>322.10 (-) 1.80e6



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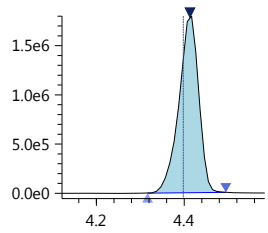
Q 366.90>322.10 (-) 1.80e6



PFHxS-18O_IS
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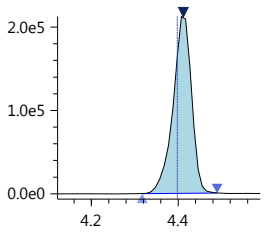
ISTD 402.70>84.05 (-) 2.13e5



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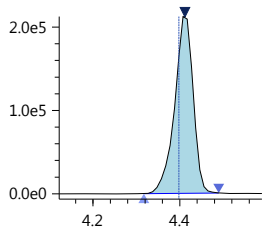

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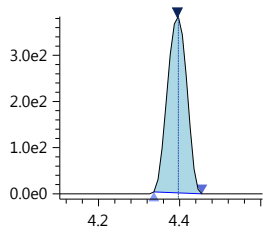
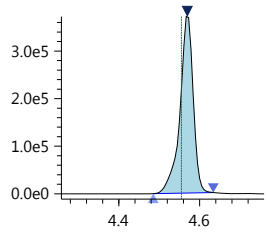
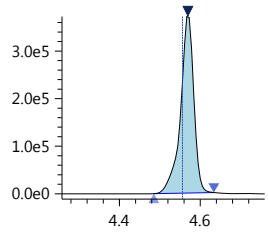
Q 399.00>80.00 (-) 3.84e2



6_2-FTS-13C
Conc 6.8379
RT 4.570 Area 853461
Q 428.90>409.00 (-) 3.73e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.570 Area 853461
ISTD 428.90>409.00 (-) 3.73e5



Insight Report

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6_2-FTS_1
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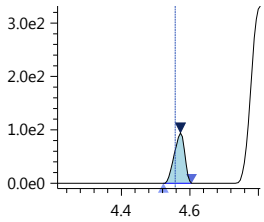
Q 427.00>407.00 (-) 3.32e2



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Conc ----
RT ---- Area ----
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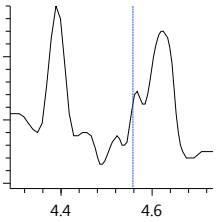

PFOA-13C_IS
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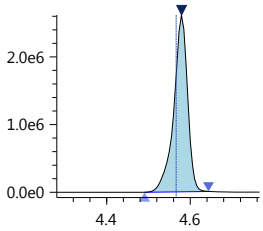
RT 4.579 Area 5993106
ISTD 416.80>372.05 (-) 2.62e6



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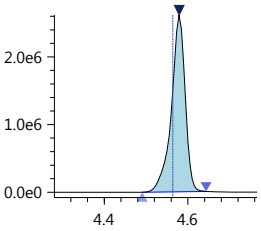
Conc 5.4098
RT 4.579 Area 5993106
Q 416.80>372.05 (-) 2.62e6



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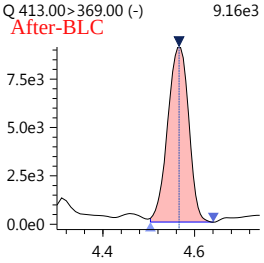
RT 4.566 Area 28983
Q 413.00>369.00 (-) 9.16e3



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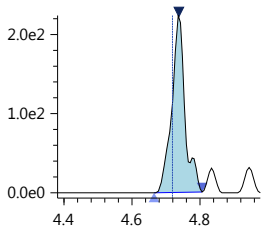
RT 4.738 Area 607
Q 499.00>80.00 (-) 2.24e2



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Conc 5.0000
RT 4.734 Area 757261
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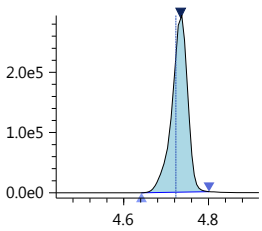

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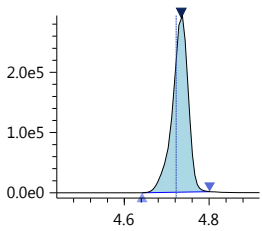

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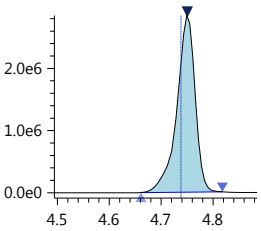
ISTD 467.80>423.00 (-) 2.85e6



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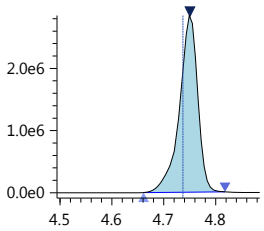
Q 467.80>423.00 (-) 2.85e6



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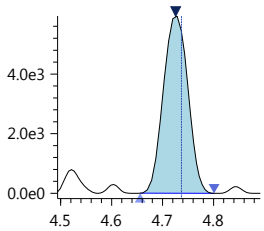

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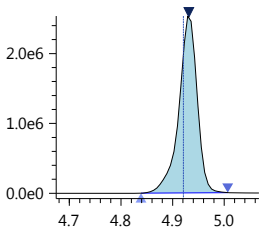
ISTD 514.80>469.95 (-) 2.54e6



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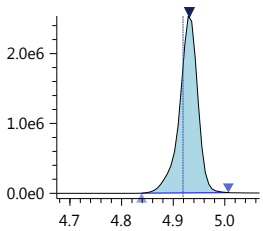

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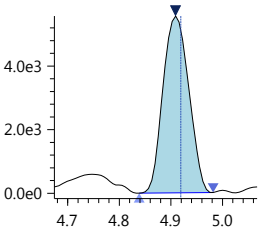
RT 4.909 Area 19400
Q 513.00>468.80 (-) 5.57e3



8_2-FTS-13C_IS
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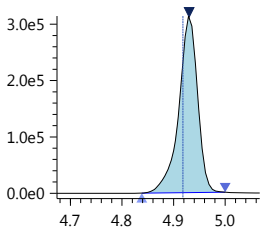
RT 4.930 Area 792324
ISTD 528.80>509.00 (-) 3.15e5



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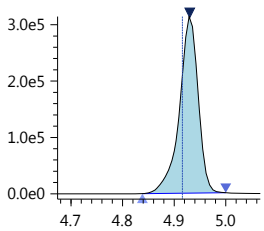
RT 4.930 Area 792324
Q 528.80>509.00 (-) 3.15e5



8_2-FTS_1
Conc 0.0005
RT 4.931 Area 82
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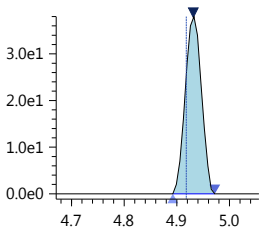

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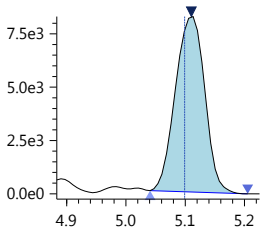
Q 563.00>518.90 (-) 8.31e3



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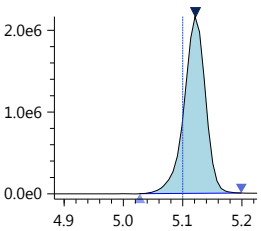
ISTD 564.80>519.95 (-) 2.17e6



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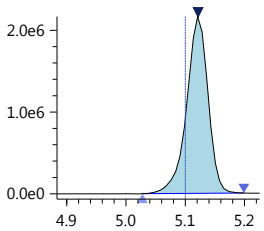
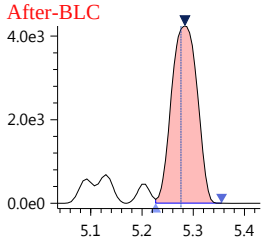
Q 564.80>519.95 (-) 2.17e6



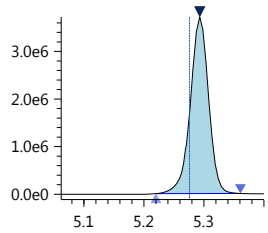
Insight Report

Printed at 3/21/2019 9:48:23 AM

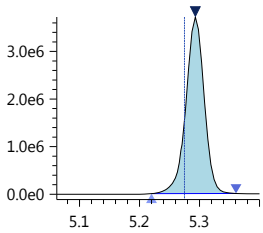
PFDoA
Conc 0.0056
RT 5.284 Area 14889
Q 613.05>569.00 (-) 4.24e3
After-BLC



PFDoA-13C
Conc 5.1045
RT 5.293 Area 7841515
Q 614.80>569.95 (-) 3.72e6



PFDoA-13C_IS
Conc 5.0000
RT 5.293 Area 7841515
ISTD 614.80>569.95 (-) 3.72e6



PFTrDA
Conc -0.0002
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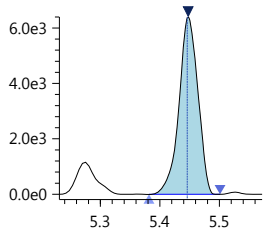
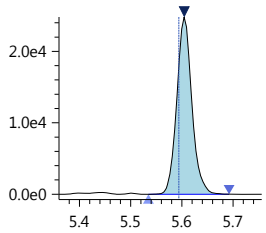
Q 663.00>618.90 (-) 6.40e3



PFTeDA
Conc -0.0100
RT 5.605 Area 50870
Q 713.40>669.00 (-) 2.48e4



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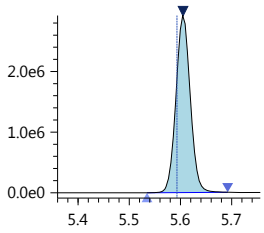
Q 714.70>669.90 (-) 2.92e6



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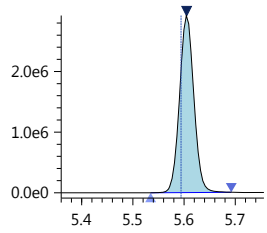
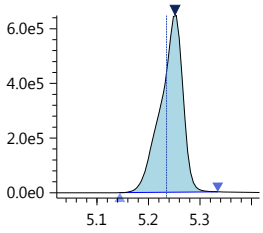


FOSA-13C_IS
Conc 5.0000
RT 5.252 Area 1935026
ISTD 506.00>78.05 (-) 6.48e5



FOSA-13C
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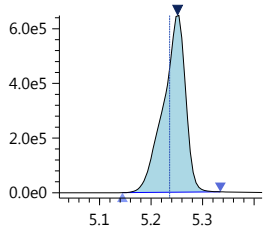
RT 5.252 Area 1935026
Q 506.00>78.05 (-) 6.48e5



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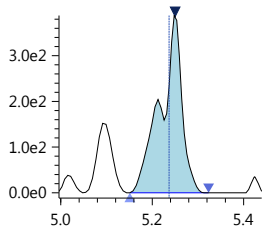
RT 5.250 Area 1268
Q 498.20>78.00 (-) 3.88e2



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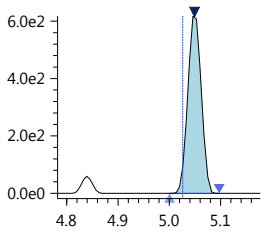
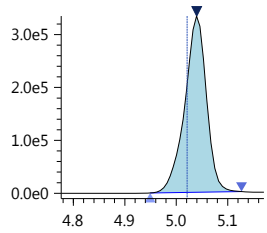
Conc 0.0095
RT 5.049 Area 1140
Q 570.20>419.00 (-) 6.18e2



N-MeFOSAA-d3
Conc 3.3765
RT 5.040 Area 972194
Q 572.80>419.05 (-) 3.35e5



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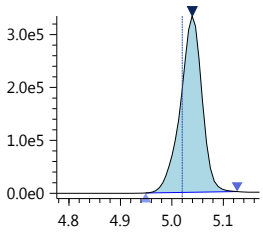
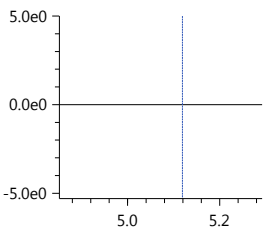
ISTD 572.80>419.05 (-) 3.35e5



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
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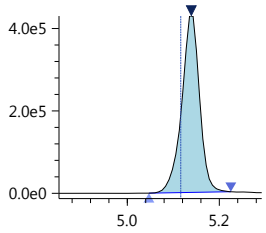
ISTD 588.80>419.00 (-) 4.30e5



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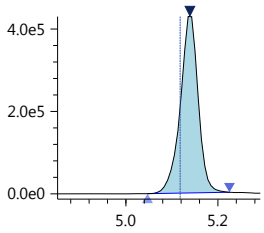
Q 588.80>419.00 (-) 4.30e5



13C7-PFUnDA_IS
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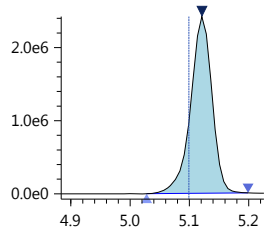
RT 5.121 Area 6070444
ISTD 570.00>525.00 (-) 2.42e6



Insight Report

Printed at 3/21/2019 9:16:10 AM

190319_014

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Date acquired: 3/19/2019 12:13:43 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_014.lcd
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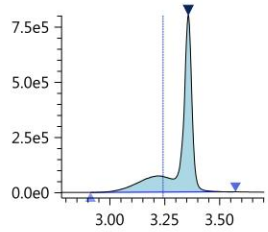
PFBA-13C_IS
Conc 5.0000
RT 3.357 Area 2840982
ISTD 216.90>172.15 (-) 8.03e5



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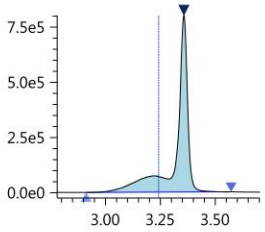
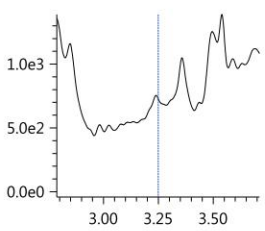
Q 216.90>172.15 (-) 8.03e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.39e3



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RT 3.962 Area 1824632
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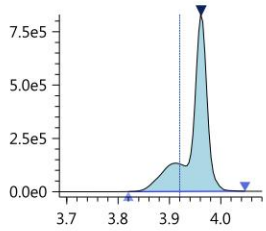

PFPeA-13C
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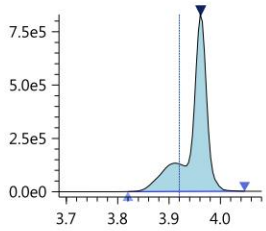

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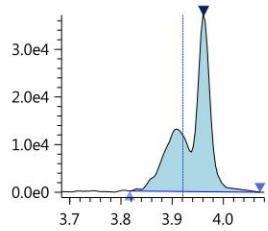
Q 263.05>219.10 (-) 3.72e4



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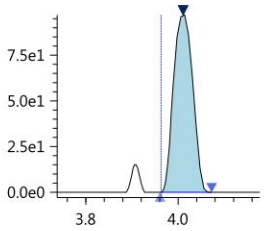
RT 4.011 Area 282
Q 299.00>80.00 (-) 9.70e1



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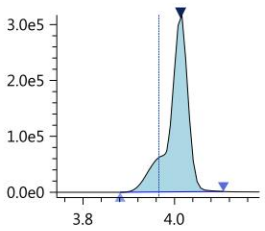

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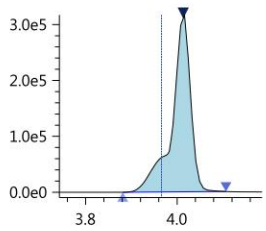
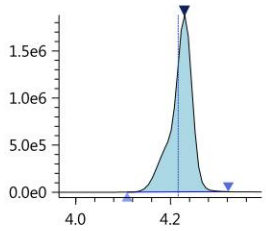
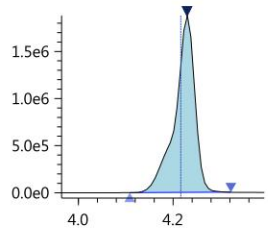


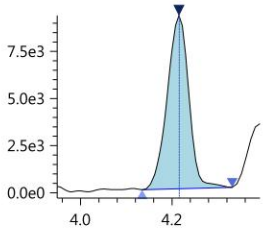
PFHxA-13C_IS
Conc 5.0000
RT 4.229 Area 5405472
ISTD 314.90>270.10 (-) 1.88e6



PFHxA-13C
Conc 5.0021
RT 4.229 Area 5405472
Q 314.90>270.10 (-) 1.88e6



PFHxA
Conc -0.0039
RT 4.215 Area 30141
Q 313.00>269.00 (-) 9.41e3



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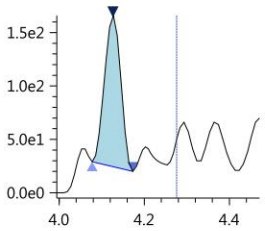
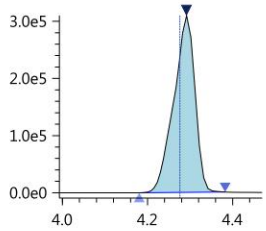
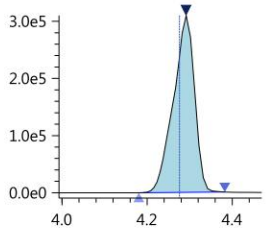
Conc 0.0016
RT 4.126 Area 375
Q 329.00>169.00 (-) 1.66e2



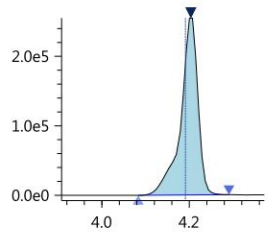
HFPO_DA-13C_IS
Conc 5.0000
RT 4.291 Area 1069239
ISTD 332.00>286.80 (-) 3.10e5



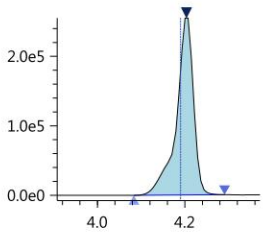
HFPO_DA-13C
Conc 4.5568
RT 4.291 Area 1069239
Q 332.00>286.80 (-) 3.10e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.204 Area 691580
ISTD 328.80>309.05 (-) 2.55e5



4_2-FTS-13C
Conc 4.9018
RT 4.204 Area 691580
Q 328.80>309.05 (-) 2.55e5



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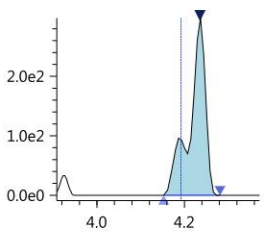
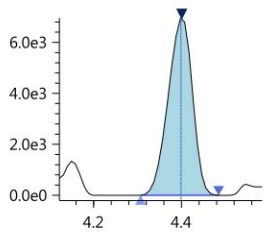
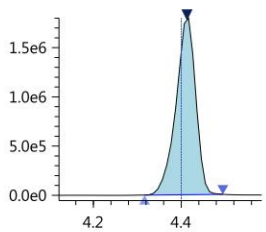
Conc 0.0047
RT 4.236 Area 751
Q 327.00>307.05 (-) 2.98e2



PFHpA
Conc -0.0097
RT 4.401 Area 26838
Q 362.90>319.00 (-) 6.96e3



PFHpA-13C_IS
Conc 5.0000
RT 4.413 Area 5644251
ISTD 366.90>322.10 (-) 1.80e6



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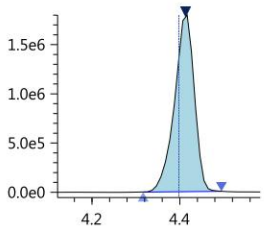
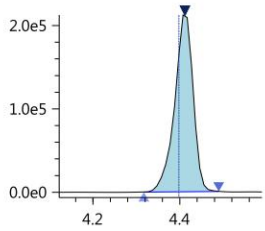
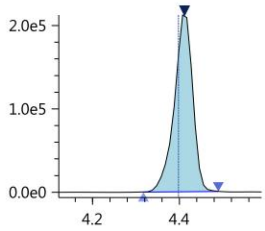
PFHpA-13C
Conc 5.0784
RT 4.413 Area 5644251
Q 366.90>322.10 (-) 1.80e6



PFHxS-18O_IS
Conc 5.0000
RT 4.412 Area 631288
ISTD 402.70>84.05 (-) 2.13e5



PFHxS-18O
Conc 5.7957
RT 4.412 Area 631288
Q 402.70>84.05 (-) 2.13e5



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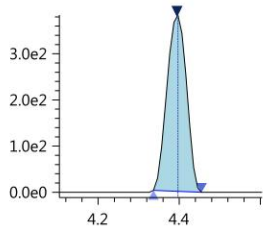
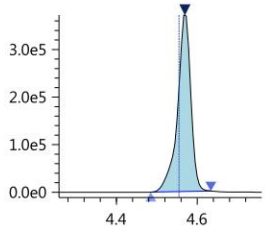
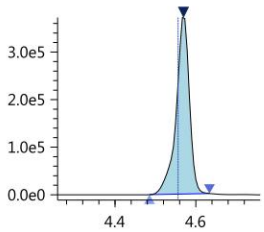
Conc 0.0094
RT 4.395 Area 1286
Q 399.00>80.00 (-) 3.84e2



6_2-FTS-13C
Conc 6.8379
RT 4.570 Area 853461
Q 428.90>409.00 (-) 3.73e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.570 Area 853461
ISTD 428.90>409.00 (-) 3.73e5



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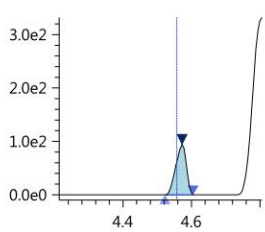
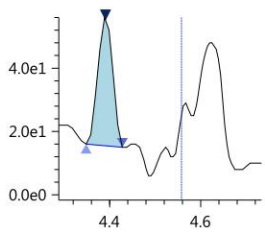
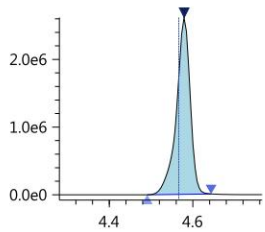
Conc 0.0011
RT 4.573 Area 201
Q 427.00>407.00 (-) 3.32e2



PFHpS_1
Conc 0.0006
RT 4.391 Area 92
Q 449.00>80.15 (-) 5.60e1



PFOA-13C_IS
Conc 5.0000
RT 4.579 Area 5993106
ISTD 416.80>372.05 (-) 2.62e6



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Conc 5.4098
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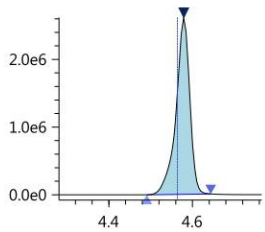
Q 416.80>372.05 (-) 2.62e6



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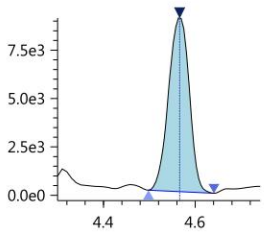
Conc 0.0035
RT 4.566 Area 28465
Q 413.00>369.00 (-) 9.16e3



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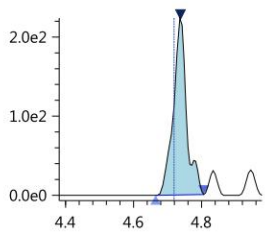
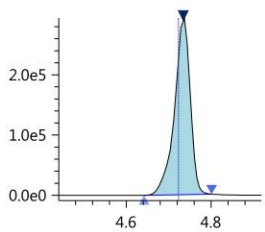
Conc 0.0059
RT 4.738 Area 607
Q 499.00>80.00 (-) 2.24e2



PFOS-13C_IS
Conc 5.0000
RT 4.734 Area 757261
ISTD 502.80>80.05 (-) 2.94e5



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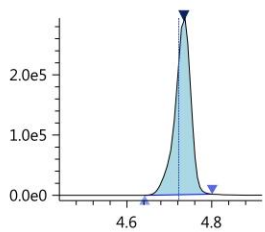
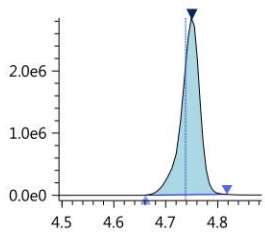
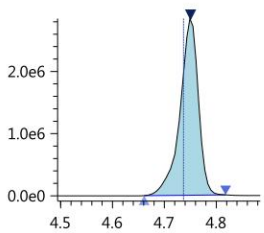
Conc 5.8599
RT 4.734 Area 757261
Q 502.80>80.05 (-) 2.94e5



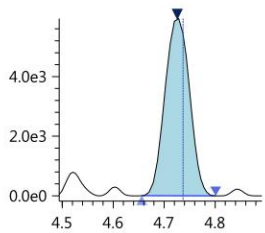
PFNA-13C_IS
Conc 5.0000
RT 4.750 Area 6969567
ISTD 467.80>423.00 (-) 2.85e6



PFNA-13C
Conc 5.6093
RT 4.750 Area 6969567
Q 467.80>423.00 (-) 2.85e6



PFNA
Conc 0.0043
RT 4.726 Area 20057
Q 463.00>418.90 (-) 5.95e3



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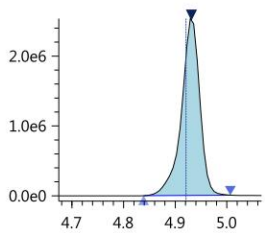
Conc 5.0000
RT 4.932 Area 6241562
ISTD 514.80>469.95 (-) 2.54e6



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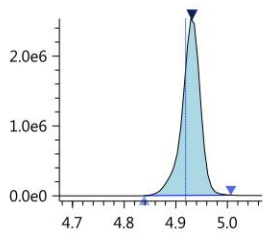
Conc 5.3250
RT 4.932 Area 6241562
Q 514.80>469.95 (-) 2.54e6



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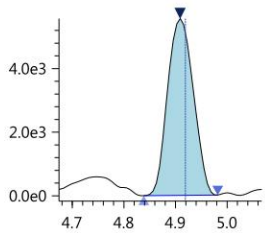
RT 4.909 Area 19400
Q 513.00>468.80 (-) 5.57e3



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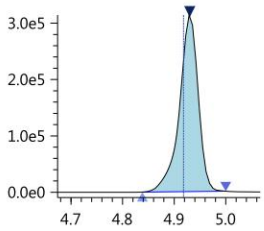
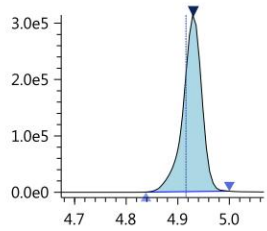
8_2-FTS-13C_IS
Conc 5.0000
RT 4.930 Area 792324
ISTD 528.80>509.00 (-) 3.15e5



8_2-FTS-13C
Conc 5.4409
RT 4.930 Area 792324
Q 528.80>509.00 (-) 3.15e5



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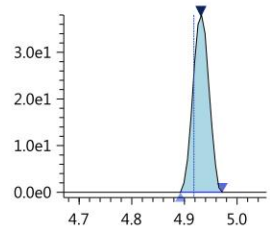
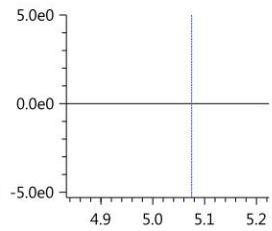
Conc 0.0005
RT 4.931 Area 82
Q 527.10>506.90 (-) 3.80e1



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



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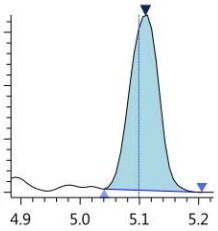
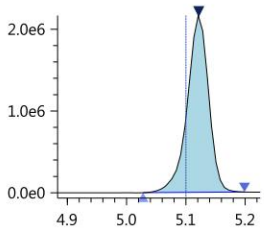
Conc -0.0063
RT 5.110 Area 28401
Q 563.00>518.90 (-) 8.31e3



PFUnA-13C_IS
Conc 5.0000
RT 5.122 Area 5430662
ISTD 564.80>519.95 (-) 2.17e6



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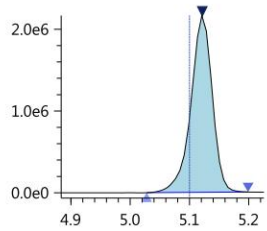
Conc 5.1493
RT 5.122 Area 5430662
Q 564.80>519.95 (-) 2.17e6



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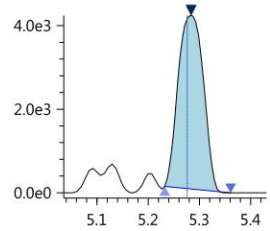
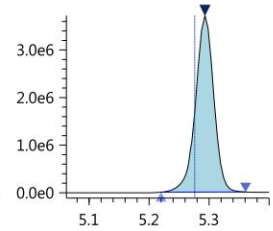
Conc 0.0050
RT 5.284 Area 14293
Q 613.05>569.00 (-) 4.24e3



PFDoA-13C
Conc 5.1045
RT 5.293 Area 7841515
Q 614.80>569.95 (-) 3.72e6



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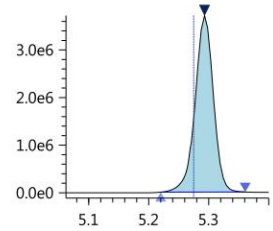
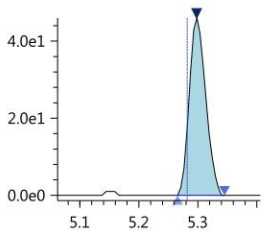
Conc 5.0000
RT 5.293 Area 7841515
ISTD 614.80>569.95 (-) 3.72e6



10_2-FtS_1
Conc 0.0005
RT 5.298 Area 90
Q 627.00>606.95 (-) 4.60e1



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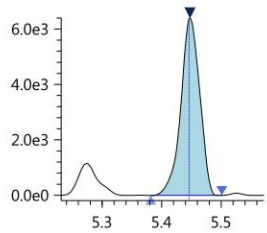
Conc -0.0002
RT 5.447 Area 14180
Q 663.00>618.90 (-) 6.40e3



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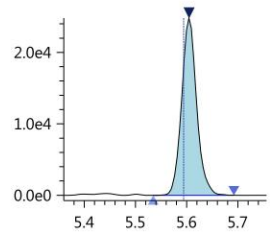
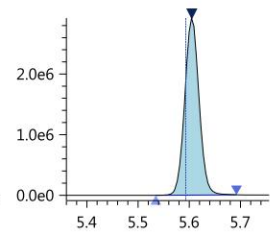
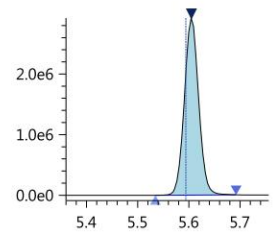
Conc -0.0100
RT 5.605 Area 50870
Q 713.40>669.00 (-) 2.48e4



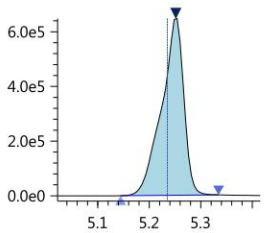
PFTeDA-13C
Conc 4.9996
RT 5.605 Area 5686716
Q 714.70>669.90 (-) 2.92e6



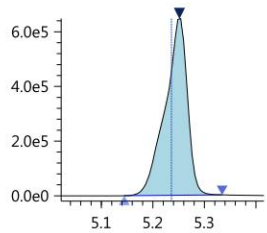
PFTeDA-13C_IS
Conc 5.0000
RT 5.605 Area 5686716
ISTD 714.70>669.90 (-) 2.92e6



FOSA-13C_IS
Conc 5.0000
RT 5.252 Area 1935026
ISTD 506.00>78.05 (-) 6.48e5



FOSA-13C
Conc 4.9042
RT 5.252 Area 1935026
Q 506.00>78.05 (-) 6.48e5



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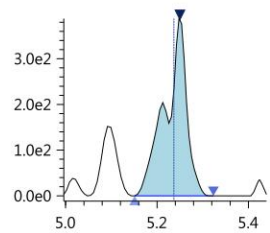
Conc 0.0025
RT 5.250 Area 1268
Q 498.20>78.00 (-) 3.88e2



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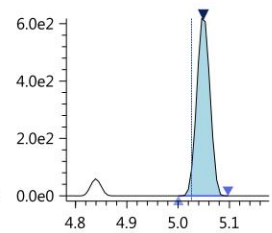
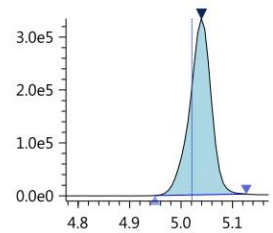
Conc 0.0095
RT 5.049 Area 1140
Q 570.20>419.00 (-) 6.18e2



N-MeFOSAA-d3
Conc 3.3765
RT 5.040 Area 972194
Q 572.80>419.05 (-) 3.35e5



Insight Report

Printed at 3/21/2019 9:16:10 AM

N-MeFOSAA-d3_IS
Conc 5.0000
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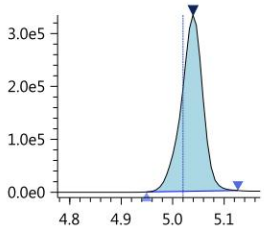
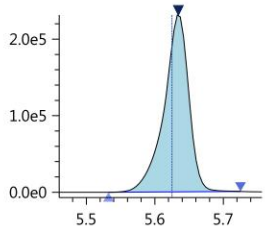
ISTD 572.80>419.05 (-) 3.35e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.634 Area 580946
ISTD 514.90>168.90 (-) 2.32e5



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Conc 4.0517
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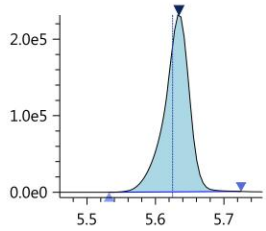
Q 514.90>168.90 (-) 2.32e5



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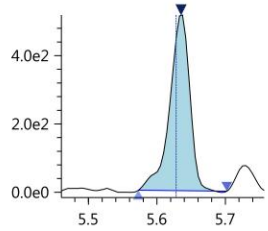
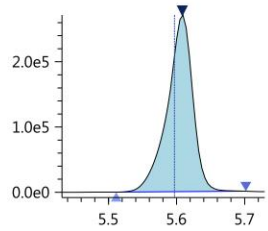
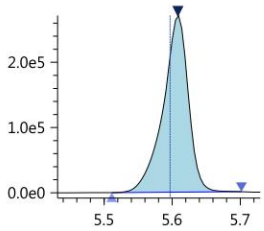
Q 512.00>169.10 (-) 5.19e2



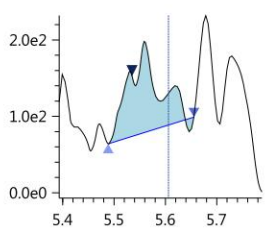
N-MeFOSE-d7
Conc 4.6016
RT 5.608 Area 697736
Q 622.70>59.10 (-) 2.72e5



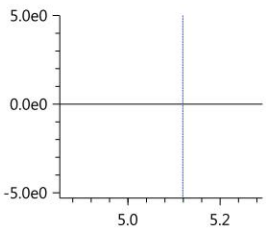
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.608 Area 697736
ISTD 622.70>59.10 (-) 2.72e5



N-MeFOSE
Conc 0.0026
RT 5.535 Area 471
Q 616.00>59.00 (-) 2.32e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 0.00e0



N-EtFOSAA-d5_IS
Conc 5.0000
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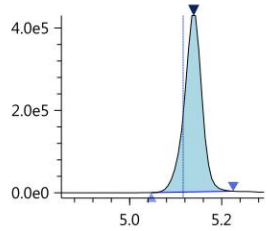
ISTD 588.80>419.00 (-) 4.30e5



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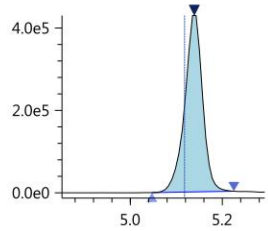
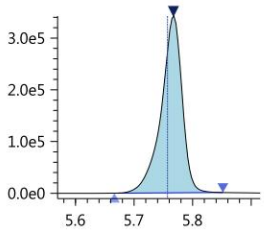
Q 588.80>419.00 (-) 4.30e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.767 Area 848082
ISTD 530.90>169.15 (-) 3.43e5



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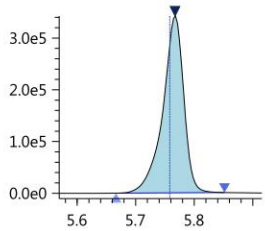
Q 530.90>169.15 (-) 3.43e5



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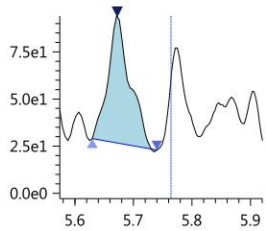
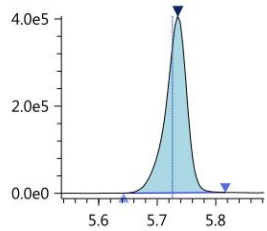
Conc 0.0062
RT 5.672 Area 175
Q 526.90>169.10 (-) 9.40e1



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.735 Area 1012106
ISTD 638.70>59.10 (-) 4.07e5



N-EtFOSE-d9
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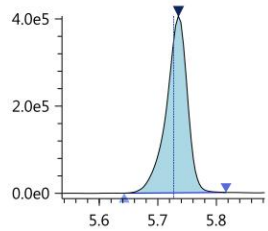
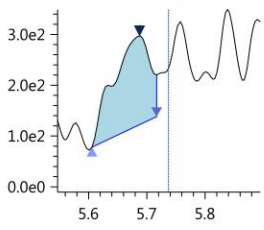
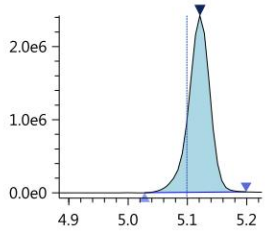
Q 638.70>59.10 (-) 4.07e5



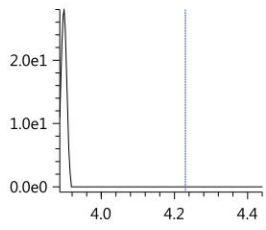
N-EtFOSE
Conc 0.0041
RT 5.687 Area 783
Q 630.00>58.90 (-) 3.49e2



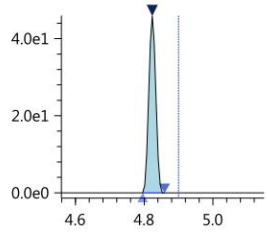
13C7-PFUnDA_IS
Conc 5.0000
RT 5.121 Area 6070444
ISTD 570.00>525.00 (-) 2.42e6



PFPeS
Conc ----
RT ---- Area ----
Q 349.00>99.00 (-) 2.80e1



PFNS
Conc 0.0006
RT 4.823 Area 65
Q 549.00>99.00 (-) 4.60e1



1st EJD 03/28/19
2nd 03/28/19

Validation Report

Data File: J:\LCMS06\Data\190325_b6\190325_013
Lab ID: KQ1904043-02
RunType: CCB
Matrix: Water

Date Acquired: 3/25/19 11:16
Batch ID: 629106
Analysis Method: PFC/537M/PFOA

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	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	18O2-PFHxS	138	70	130	narrate native ok

Primary Review: _____

Printed: 3/28/19 14:16
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Secondary Review: _____

1st EJD 03/28/19
2nd 03/28/19

Quantitation Report

Data File:	J:\LCMS06\Data\190325_b6\190325_013	**Instrument:**	K-LCMS-06
Acqu Date:	3/25/19 11:16	**Vial:**	2
Run Type:	CCB	**Dilution:**	1
Lab ID:	KQ1904043-02	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	2/28/19	**Receive Date:**	3/4/19

Analysis Lot:	629106	**Prep Lot:**		**Report Group:**	KQ1904043
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.096	+0.01	6477546	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
18O2-PFHxS	4.407	+0.01	515144	4.4322	89	26 - 122	Y
13C4-PFOS	4.721	+0.01	671698	4.8711	97	25 - 121	Y
13C5-PFPeA	3.953	+0.01	1835321	4.9082	98	27 - 138	Y
13C2-PFHxA	4.226	+0.02	5728199	4.9676	99	28 - 132	Y
13C4-PFHpA	4.408	+0.02	5524610	4.6583	93	19 - 139	Y
13C2-6:2 FTS	4.560	+0.01	687383	5.1611	103	10 - 226	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorohexane sulfonic acid (PFHxS)	4.400	+0.01	587	0.0052	0.17	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.718	+0.01	350	0.0038	0.12	U	Y
Perfluoropentanoic acid (PFPeA)	3.954	+0.01	98362	-0.0098	0	U	Y
Perfluorohexanoic acid (PFHxA)	4.200	-0.01	24531	-0.0111	0	U	Y
Perfluoroheptanoic acid (PFHpA)	4.390	0.00	13813	-0.0240	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.552	+0.00	176	0.0012	0.038	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

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Insight Report

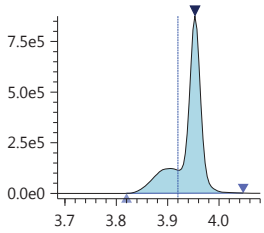
Printed at 3/28/2019 2:02:44 PM

190325_013

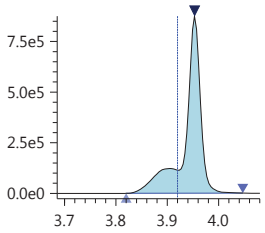
Sample ID: IB
Date acquired: 3/25/2019 11:16:57 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_013.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFPeA-13C_IS	Auto	3.953	1835321	1835321	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.953	1835321	6477546	26	4.9082	ng/mL	----
PFPeA	Auto	3.954	98362	1835321	4	-0.0098	ng/mL	----
PFHxA-13C_IS	Auto	4.226	5728199	5728199	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.226	5728199	6477546	26	4.9676	ng/mL	----
PFHxA	M	4.200	24531	5728199	6	-0.0111	ng/mL	----
PFHpA	M	4.390	13813	5524610	8	-0.0240	ng/mL	----
PFHpA-13C_IS	Auto	4.408	5524610	5524610	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.408	5524610	6477546	26	4.6583	ng/mL	----
PFHxS-18O_IS	Auto	4.407	515144	515144	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.407	515144	6477546	26	4.4322	ng/mL	----
PFHxS_1	Auto	4.400	587	515144	7	0.0052	ng/mL	----
6_2-FTS-13C	Auto	4.560	687383	6477546	26	5.1611	ng/mL	----
6_2-FTS-13C_IS	Auto	4.560	687383	687383	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.552	176	687383	10	0.0012	ng/mL	----
PFOS_1	Auto	4.718	350	671698	13	0.0038	ng/mL	----
PFOS-13C_IS	Auto	4.721	671698	671698	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.721	671698	6477546	26	4.8711	ng/mL	----
13C7-PFUnDA_IS	Auto	5.096	6477546	6477546	26	5.0000	ng/mL	----

PFPeA-13C_IS
Conc 5.0000
RT 3.953 Area 1835321
ISTD 267.90>223.00 (-) 8.75e5



PFPeA-13C
Conc 4.9082
RT 3.953 Area 1835321
Q 267.90>223.00 (-) 8.75e5



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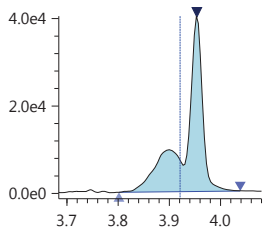
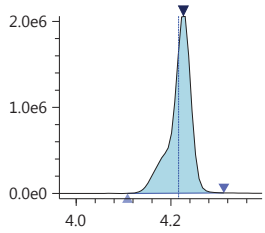
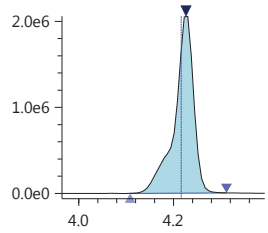
Conc -0.0098
RT 3.954 Area 98362
Q 263.05>219.10 (-) 4.06e4



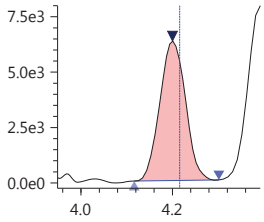
PFHxA-13C_IS
Conc 5.0000
RT 4.226 Area 5728199
ISTD 314.90>270.10 (-) 2.06e6



PFHxA-13C
Conc 4.9676
RT 4.226 Area 5728199
Q 314.90>270.10 (-) 2.06e6



PFHxA
Conc -0.0111
RT 4.200 Area 24531
Q 313.00>269.00 (-) 8.00e3
After-BLC



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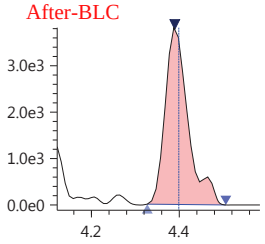
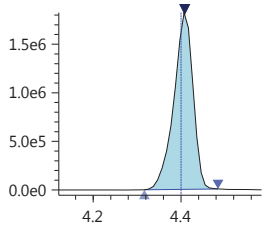
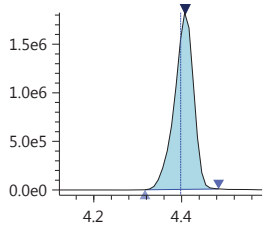
Conc -0.0240
RT 4.390 Area 13813
Q 362.90>319.00 (-) 3.82e3
After-BLC



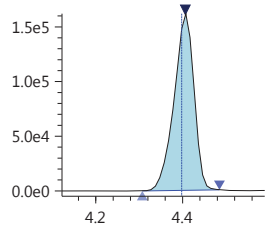
PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 5524610
ISTD 366.90>322.10 (-) 1.82e6



PFHpA-13C
Conc 4.6583
RT 4.408 Area 5524610
Q 366.90>322.10 (-) 1.82e6



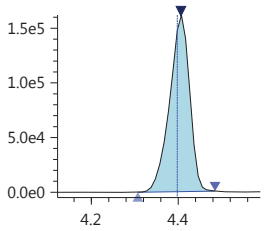
PFHxS-18O_IS
Conc 5.0000
RT 4.407 Area 515144
ISTD 402.70>84.05 (-) 1.62e5



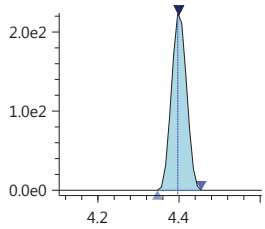
Insight Report

Printed at 3/28/2019 2:02:44 PM

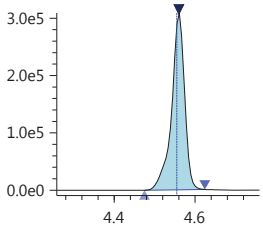
PFHxS-18O
Conc 4.4322
RT 4.407 Area 515144
Q 402.70>84.05 (-) 1.62e5



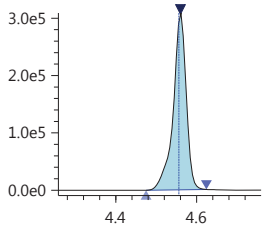
PFHxS_1
Conc 0.0052
RT 4.400 Area 587
Q 399.00>80.00 (-) 2.24e2



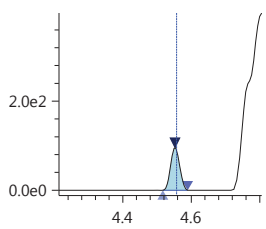
6_2-FTS-13C
Conc 5.1611
RT 4.560 Area 687383
Q 428.90>409.00 (-) 3.09e5



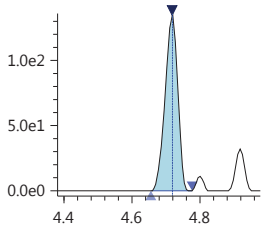
6_2-FTS-13C_IS
Conc 5.0000
RT 4.560 Area 687383
ISTD 428.90>409.00 (-) 3.09e5



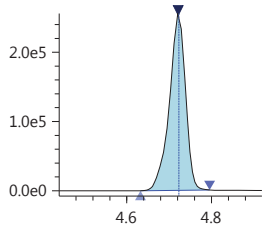
6_2-FTS_1
Conc 0.0012
RT 4.552 Area 176
Q 427.00>407.00 (-) 3.98e2



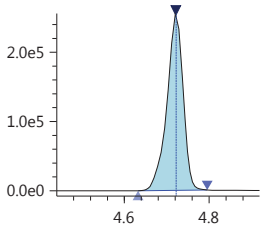
PFOS_1
Conc 0.0038
RT 4.718 Area 350
Q 499.00>80.00 (-) 1.36e2



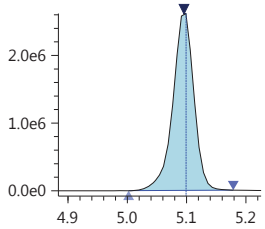
PFOS-13C_IS
Conc 5.0000
RT 4.721 Area 671698
ISTD 502.80>80.05 (-) 2.56e5



PFOS-13C
Conc 4.8711
RT 4.721 Area 671698
Q 502.80>80.05 (-) 2.56e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.096 Area 6477546
ISTD 570.00>525.00 (-) 2.62e6



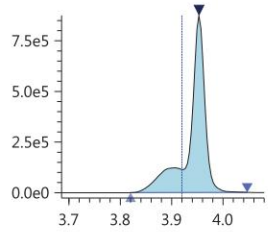
Insight Report

Printed at 3/28/2019 1:52:07 PM

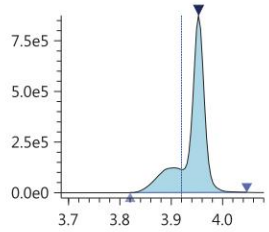
190325_013

Sample ID: IB
Date acquired: 3/25/2019 11:16:57 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_013.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

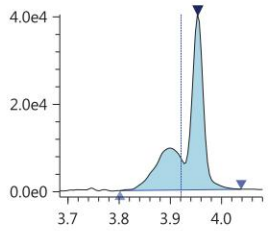
PFPeA-13C_IS
Conc 5.0000
RT 3.953 Area 1835321
ISTD 267.90>223.00 (-) 8.75e5



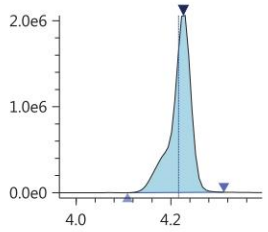
PFPeA-13C
Conc 4.9082
RT 3.953 Area 1835321
Q 267.90>223.00 (-) 8.75e5



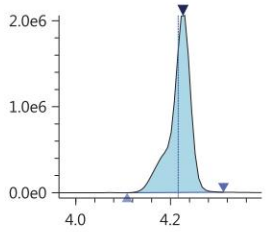
PFPeA
Conc -0.0098
RT 3.954 Area 98362
Q 263.05>219.10 (-) 4.06e4



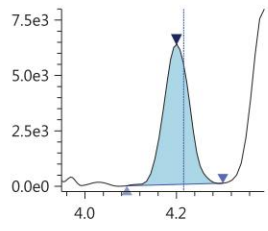
PFHxA-13C_IS
Conc 5.0000
RT 4.226 Area 5728199
ISTD 314.90>270.10 (-) 2.06e6



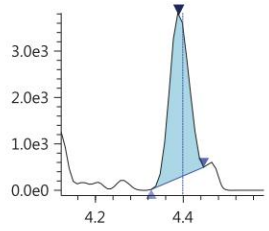
PFHxA-13C
Conc 4.9676
RT 4.226 Area 5728199
Q 314.90>270.10 (-) 2.06e6



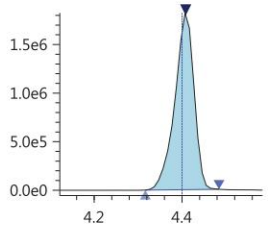
PFHxA
Conc -0.0108
RT 4.200 Area 24864
Q 313.00>269.00 (-) 8.00e3



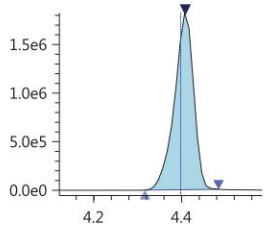
PFHpA
Conc -0.0274
RT 4.390 Area 10900
Q 362.90>319.00 (-) 3.82e3



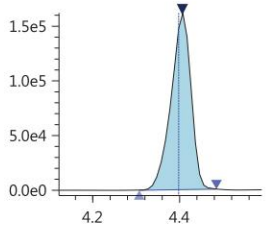
PFHpA-13C_IS
Conc 5.0000
RT 4.408 Area 5524610
ISTD 366.90>322.10 (-) 1.82e6



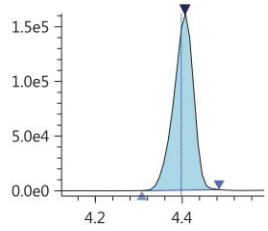
PFHpA-13C
Conc 4.6583
RT 4.408 Area 5524610
Q 366.90>322.10 (-) 1.82e6



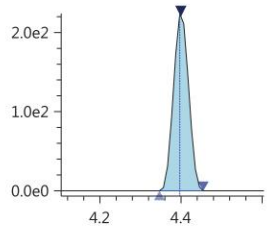
PFHxS-18O_IS
Conc 5.0000
RT 4.407 Area 515144
ISTD 402.70>84.05 (-) 1.62e5



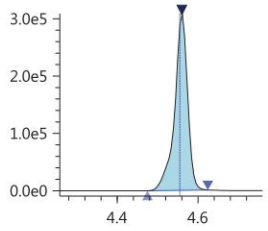
PFHxS-18O
Conc 4.4322
RT 4.407 Area 515144
Q 402.70>84.05 (-) 1.62e5



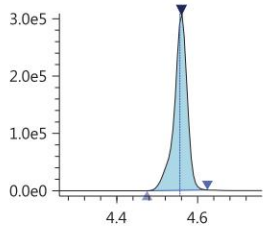
PFHxS_1
Conc 0.0052
RT 4.400 Area 587
Q 399.00>80.00 (-) 2.24e2



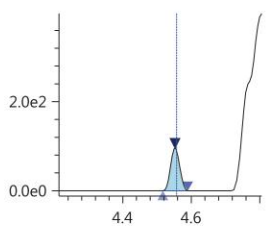
6_2-FTS-13C
Conc 5.1611
RT 4.560 Area 687383
Q 428.90>409.00 (-) 3.09e5



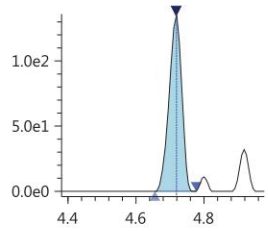
6_2-FTS-13C_IS
Conc 5.0000
RT 4.560 Area 687383
ISTD 428.90>409.00 (-) 3.09e5



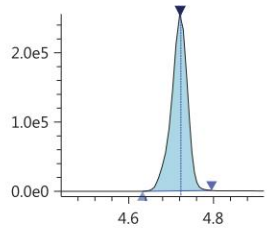
6_2-FTS_1
Conc 0.0012
RT 4.552 Area 176
Q 427.00>407.00 (-) 3.98e2



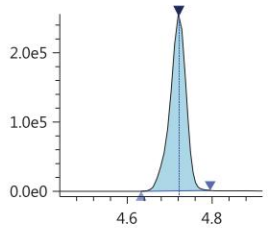
PFOS_1
Conc 0.0038
RT 4.718 Area 350
Q 499.00>80.00 (-) 1.36e2



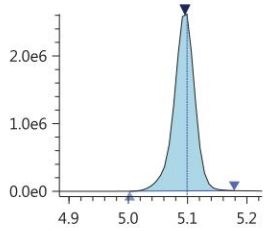
PFOS-13C_IS
Conc 5.0000
RT 4.721 Area 671698
ISTD 502.80>80.05 (-) 2.56e5



PFOS-13C
Conc 4.8711
RT 4.721 Area 671698
Q 502.80>80.05 (-) 2.56e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.096 Area 6477546
ISTD 570.00>525.00 (-) 2.62e6



1st CM 03/21/19
2nd 03/21/19

Validation Report

Data File: J:\LCMS06\Data\190319_b1\190319_013
Lab ID: KQ1903668-01
RunType: CCV
Matrix: Ground Water

Date Acquired: 3/19/19 12:03
Batch ID: 629021
Analysis Method: PFC/537M/PFOA

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: _____

1st CM 03/21/19
2nd 03/21/19

Quantitation Report

Data File:	J:\LCMS06\Data\190319_b1\190319_013	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:03	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1903668-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	IV	**Matrix:**	Ground Water
Prod Code:	PFOA	**Collect Date:**	3/5/19	**Receive Date:**	3/8/19

Analysis Lot:	629021	**Prep Lot:**		**Report Group:**	KQ1903668
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.114		6145462	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	4.012		838869	5.2329	Y
18O2-PFHxS	4.411		654976	5.9398	Y
13C4-PFOS	4.732		772396	5.9040	Y
13C4-PFBA	3.356		2834653	5.1797	Y
13C5-PFPeA	3.960		1829460	5.1570	Y
13C2-PFHxA	4.229		5293394	4.8386	Y
13C4-PFHpA	4.411		6216963	5.5254	Y
13C4-PFOA	4.576		6267374	5.5883	Y
13C5-PFNA	4.749		6743721	5.3612	Y
13C2-PFDA	4.930		5990682	5.0486	Y
13C2-PFUnDA	5.114		5491370	5.1433	Y
13C2-PFDoDA	5.288		7856152	5.0516	Y
13C2-PFTeDA	5.602		5870132	5.0979	Y
13C8-FOSA	5.246		1908867	4.7789	Y
D3-MeFOSAA	5.038		974052	3.3416	Y
D5-EtFOSAA	5.132		1087933	3.7412	Y
13C2-6:2 FTS	4.567		796396	6.3028	Y
13C2-8:2 FTS	4.928		776143	5.2647	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.011		177604	0.9866	Y
Perfluorohexane sulfonic acid (PFHxS)	4.410		117268	0.8227	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: 3/21/19 10:05
\\alprews001\starlims$\LIMSReps\QuantValidation.rpt

1st CM 03/21/19

2nd 03/21/19

Data File:	J:\LCMS06\Data\190319_b1\190319_013	**Instrument:**	K-LCMS-06
Acqu Date:	3/19/19 12:03	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1903668-01	**Raw Units:**	ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.567		132209	0.8209	Y
Perfluorooctane sulfonic acid (PFOS)	4.732		89758	0.8530	Y
Perfluorodecane sulfonic acid (PFDS)	5.092		115319	0.9009	Y
Perfluorobutanoic acid (PFBA)	3.357		572948	1.0672	Y
Perfluoropentanoic acid (PFPeA)	3.961		1000158	1.0663	Y
Perfluorohexanoic acid (PFHxA)	4.229		998666	1.0226	Y
Perfluoroheptanoic acid (PFHpA)	4.411		1083606	1.0691	Y
Perfluorooctanoic acid (PFOA)	4.576		1098943	1.0387	Y
Perfluorononanoic acid (PFNA)	4.750		1011152	1.0836	Y
Perfluorodecanoic acid (PFDA)	4.930		955143	0.9771	Y
Perfluoroundecanoic acid (PFUnDA)	5.114		937650	1.0665	Y
Perfluorododecanoic acid (PFDoDA)	5.288		949669	1.0006	Y
Perfluorotridecanoic acid (PFTrDA)	5.455		1058576	0.9970	Y
Perfluorotetradecanoic acid (PFTeDA)	5.602		509753	1.1178	Y
Perfluorooctane sulfonamide (FOSA)	5.246		474946	0.9465	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.041		140665	1.1711	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.136		113867	0.8952	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.567		165160	0.9807	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.928		136750	0.9213	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

Insight Report

Printed at 3/21/2019 9:48:23 AM

Batch File: ----
Method File: J:\LCMS06\Data\190319_b1\190319_b1.lcm
Project File: J:\LCMS06\Data\190319_b1\190319_b1.damlp
Flags File: J:\LCMS06\Data\190319_b1\190319_b1.damlp

190319_013

Sample ID: 1.0 PPB CCV
Date acquired: 3/19/2019 12:03:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_013.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.356	2834653	2834653	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.356	2834653	6145462	26	5.1797	ng/mL	5.0000
PFBA	Auto	3.357	572948	2834653	2	1.0672	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.960	1829460	1829460	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.960	1829460	6145462	26	5.1570	ng/mL	5.0000
PFPeA	Auto	3.961	1000158	1829460	4	1.0663	ng/mL	1.0000
PFBS_1	Auto	4.011	177604	838869	16	0.9866	ng/mL	0.8874
PFBS-13C	Auto	4.012	838869	6145462	26	5.2329	ng/mL	5.0000
PFBS-13C_IS	Auto	4.012	838869	838869	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.229	5293394	5293394	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.229	5293394	6145462	26	4.8386	ng/mL	5.0000
PFHxA	Auto	4.229	998666	5293394	6	1.0226	ng/mL	1.0000
PFHpA	Auto	4.411	1083606	6216963	8	1.0691	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.411	6216963	6216963	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.411	6216963	6145462	26	5.5254	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.411	654976	654976	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.411	654976	6145462	26	5.9398	ng/mL	5.0000
PFHxS_1	Auto	4.410	117268	654976	7	0.8227	ng/mL	0.9131
6_2-FTS-13C	Auto	4.567	796396	6145462	26	6.3028	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.567	796396	796396	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.567	165160	796396	10	0.9807	ng/mL	0.9512
PFHpS_1	Auto	4.567	132209	654976	7	0.8209	ng/mL	0.9534
PFOA-13C_IS	Auto	4.576	6267374	6267374	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.576	6267374	6145462	26	5.5883	ng/mL	5.0000
PFOA	Auto	4.576	1098943	6267374	9	1.0387	ng/mL	1.0000
PFOS_1	Auto	4.732	89758	772396	13	0.8530	ng/mL	0.9292
PFOS-13C_IS	Auto	4.732	772396	772396	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.732	772396	6145462	26	5.9040	ng/mL	5.0000
PFNA-13C_IS	Auto	4.749	6743721	6743721	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.749	6743721	6145462	26	5.3612	ng/mL	5.0000
PFNA	Auto	4.750	1011152	6743721	11	1.0836	ng/mL	1.0000
PFDA-13C_IS	Auto	4.930	5990682	5990682	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.930	5990682	6145462	26	5.0486	ng/mL	5.0000
PFDA	Auto	4.930	955143	5990682	12	0.9771	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.928	776143	776143	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.928	776143	6145462	26	5.2647	ng/mL	5.0000
8_2-FTS_1	Auto	4.928	136750	776143	15	0.9213	ng/mL	0.9600
PFUnA	Auto	5.114	937650	5491370	14	1.0665	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.114	5491370	5491370	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.114	5491370	6145462	26	5.1433	ng/mL	5.0000
PFDoA	Auto	5.288	949669	7856152	17	1.0006	ng/mL	1.0000
PFDoA-13C	Auto	5.288	7856152	6145462	26	5.0516	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.288	7856152	7856152	17	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.455	1058576	5870132	22	0.9970	ng/mL	1.0000
PFTeDA	Auto	5.602	509753	5870132	22	1.1178	ng/mL	1.0000
PFTeDA-13C	Auto	5.602	5870132	6145462	26	5.0979	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.602	5870132	5870132	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.246	1908867	1908867	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.246	1908867	6145462	26	4.7789	ng/mL	5.0000
FOSA	Auto	5.246	474946	1908867	18	0.9465	ng/mL	1.0000
N-MeFOSAA	Auto	5.041	140665	974052	19	1.1711	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.038	974052	6145462	26	3.3416	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.038	974052	974052	19	5.0000	ng/mL	5.0000
N-EtFOSAA	M	5.136	113867	1087933	21	0.8952	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.132	1087933	1087933	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.132	1087933	6145462	26	3.7412	ng/mL	5.0000
13C7-PFUnDA_IS	Auto	5.114	6145462	6145462	26	5.0000	ng/mL	5.0000

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PFBA-13C_IS
Conc 5.0000
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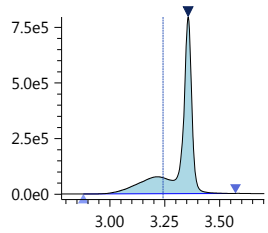
ISTD 216.90>172.15 (-) 7.97e5



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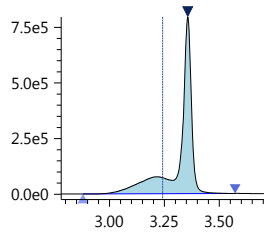
RT 3.356 Area 2834653
Q 216.90>172.15 (-) 7.97e5



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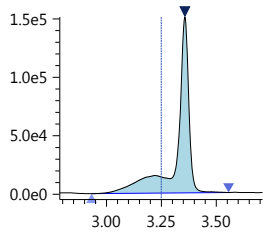
Q 213.00>169.10 (-) 1.52e5



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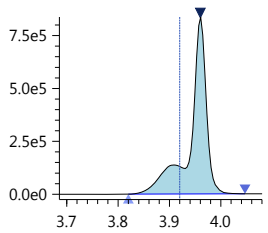
ISTD 267.90>223.00 (-) 8.38e5



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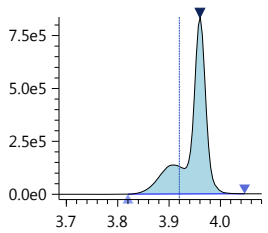

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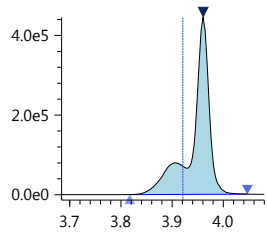
Q 263.05>219.10 (-) 4.45e5



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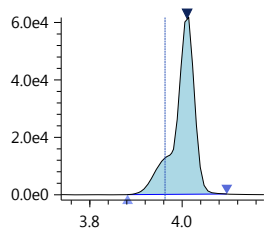
Conc 0.9866
RT 4.011 Area 177604
Q 299.00>80.00 (-) 6.17e4



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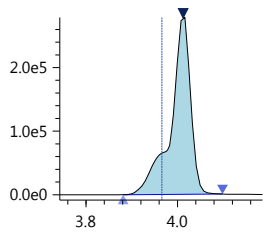
Conc 5.2329
RT 4.012 Area 838869
Q 301.80>80.00 (-) 2.79e5



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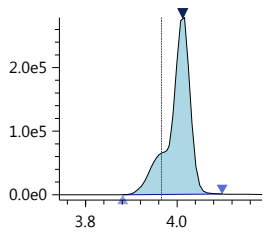
ISTD 301.80>80.00 (-) 2.79e5



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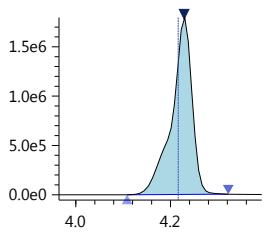

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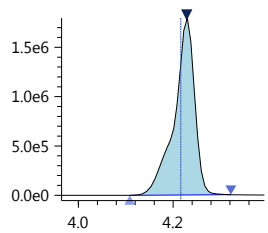

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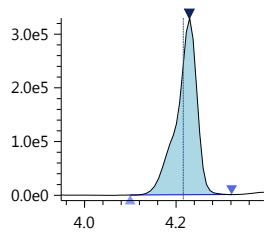
Conc 1.0226
RT 4.229 Area 998666
Q 313.00>269.00 (-) 3.30e5



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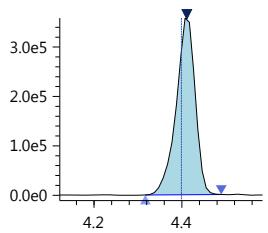
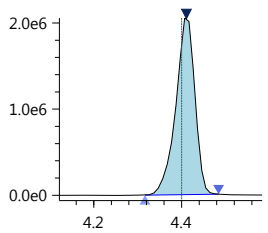
Q 362.90>319.00 (-) 3.59e5



PFHpA-13C_IS
Conc 5.0000
RT 4.411 Area 6216963
ISTD 366.90>322.10 (-) 2.06e6



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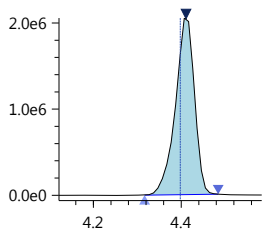
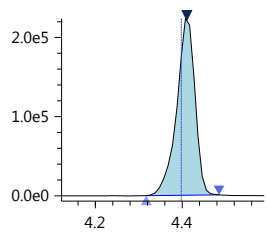
Conc 5.5254
RT 4.411 Area 6216963
Q 366.90>322.10 (-) 2.06e6



PFHxS-18O_IS
Conc 5.0000
RT 4.411 Area 654976
ISTD 402.70>84.05 (-) 2.24e5



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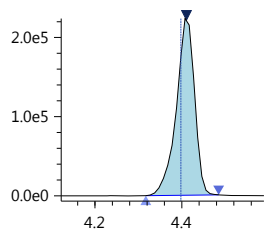
Conc 5.9398
RT 4.411 Area 654976
Q 402.70>84.05 (-) 2.24e5



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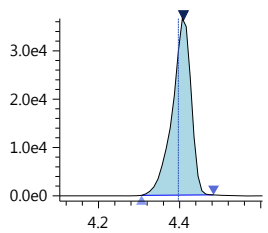
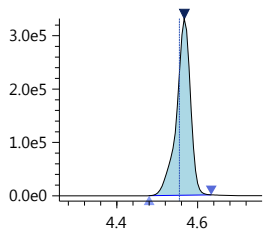
Conc 0.8227
RT 4.410 Area 117268
Q 399.00>80.00 (-) 3.67e4



6_2-FTS-13C
Conc 6.3028
RT 4.567 Area 796396
Q 428.90>409.00 (-) 3.32e5



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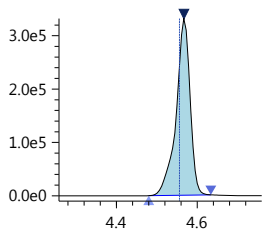
ISTD 428.90>409.00 (-) 3.32e5



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6_2-FTS_1
Conc 0.9807
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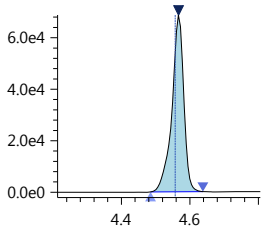
Q 427.00>407.00 (-) 6.88e4



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Conc 0.8209
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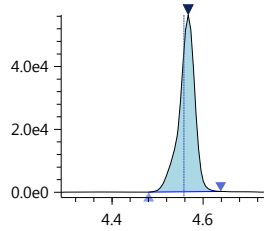
Q 449.00>80.15 (-) 5.64e4



PFOA-13C_IS
Conc 5.0000
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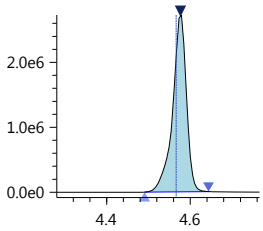
ISTD 416.80>372.05 (-) 2.73e6



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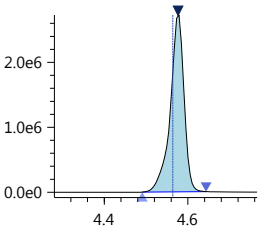
Q 416.80>372.05 (-) 2.73e6



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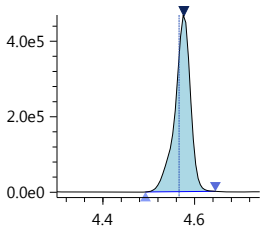
Q 413.00>369.00 (-) 4.70e5



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Conc 0.8530
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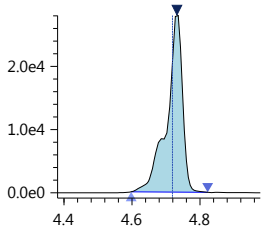
Q 499.00>80.00 (-) 2.80e4



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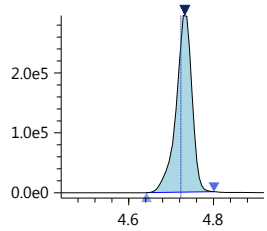
ISTD 502.80>80.05 (-) 2.96e5



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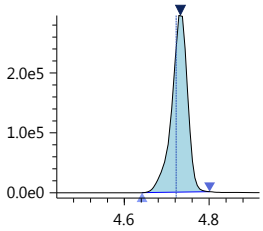

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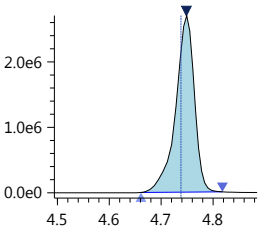
ISTD 467.80>423.00 (-) 2.71e6



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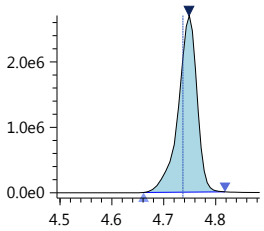

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Conc 1.0836
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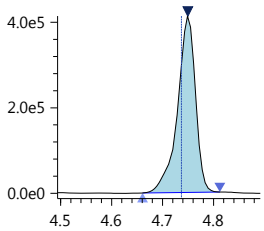
Q 463.00>418.90 (-) 4.15e5



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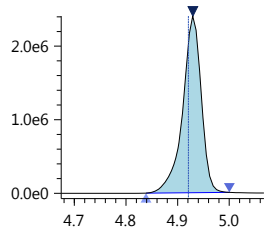

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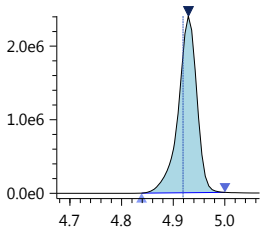

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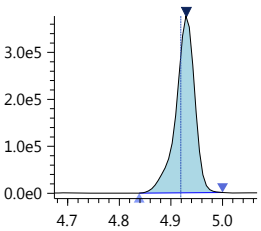
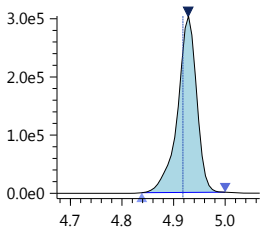
Conc 0.9771
RT 4.930 Area 955143
Q 513.00>468.80 (-) 3.77e5



8_2-FTS-13C_IS
Conc 5.0000
RT 4.928 Area 776143
ISTD 528.80>509.00 (-) 3.05e5



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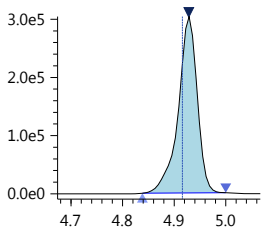
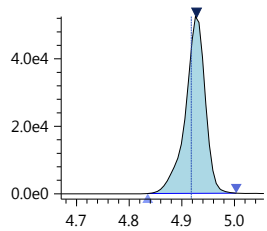
Conc 5.2647
RT 4.928 Area 776143
Q 528.80>509.00 (-) 3.05e5



8_2-FTS_1
Conc 0.9213
RT 4.928 Area 136750
Q 527.10>506.90 (-) 5.25e4



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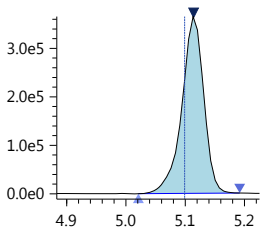

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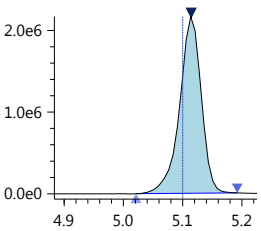
Conc 5.0000
RT 5.114 Area 5491370
ISTD 564.80>519.95 (-) 2.17e6



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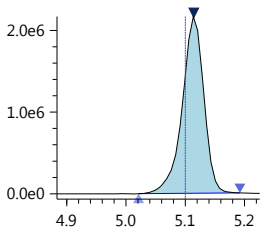

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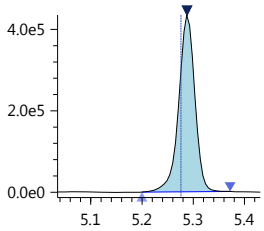

PFDoA-13C
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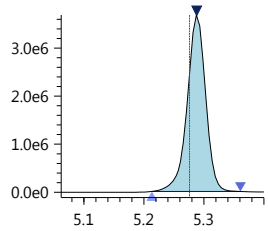
Q 614.80>569.95 (-) 3.69e6



PFDoA-13C_IS
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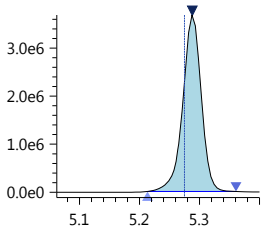
RT 5.288 Area 7856152
ISTD 614.80>569.95 (-) 3.69e6



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Conc 0.9970
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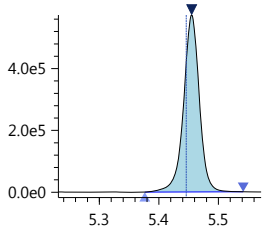
Q 663.00>618.90 (-) 5.73e5



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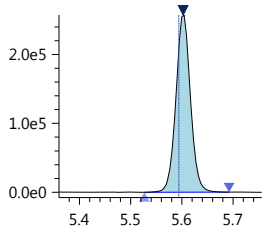
RT 5.602 Area 509753
Q 713.40>669.00 (-) 2.57e5



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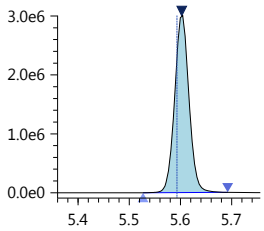

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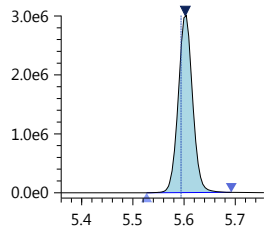

FOSA-13C_IS
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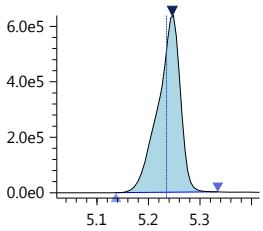

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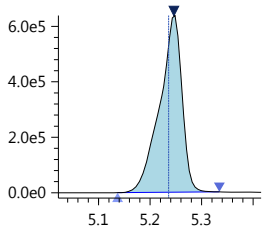
Q 506.00>78.05 (-) 6.39e5



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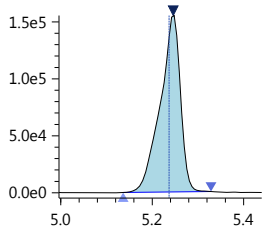
Q 498.20>78.00 (-) 1.56e5



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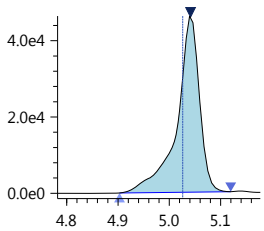

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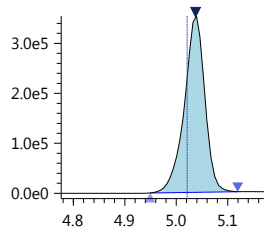
Conc 3.3416
RT 5.038 Area 974052
Q 572.80>419.05 (-) 3.55e5



N-MeFOSAA-d3_IS
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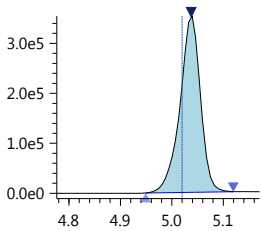
RT 5.038 Area 974052
ISTD 572.80>419.05 (-) 3.55e5



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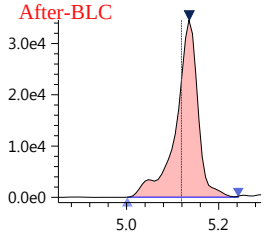
Conc 0.8952
RT 5.136 Area 113867
Q 584.20>418.95 (-) 3.46e4

After-BLC



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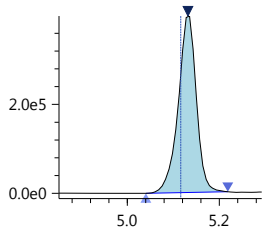
Conc 5.0000
RT 5.132 Area 1087933
ISTD 588.80>419.00 (-) 3.99e5



N-EtFOSAA-d5
Conc 3.7412
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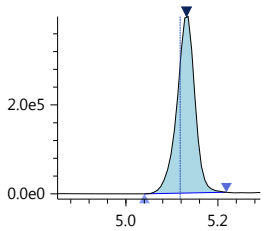
Q 588.80>419.00 (-) 3.99e5



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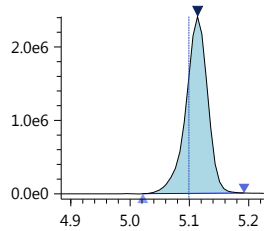

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190319_013

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Date acquired: 3/19/2019 12:03:18 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190319_b1\190319_013.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

PFBA-13C_IS
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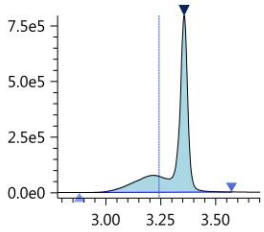

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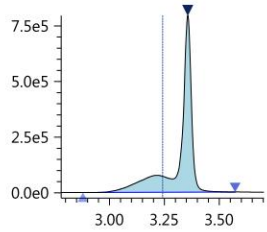

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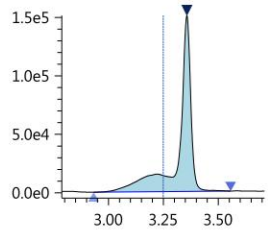
Conc 1.0672
RT 3.357 Area 572948
Q 213.00>169.10 (-) 1.52e5



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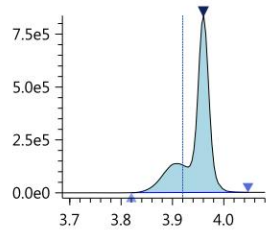
RT 3.960 Area 1829460
ISTD 267.90>223.00 (-) 8.38e5



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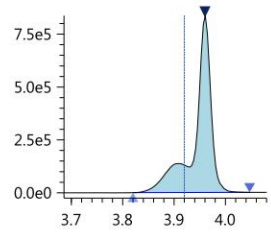

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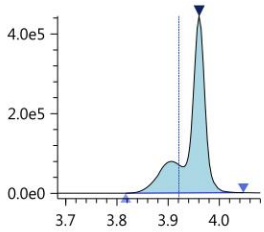

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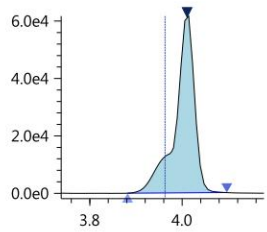

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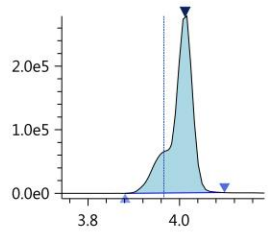
Conc 5.2329
RT 4.012 Area 838869
Q 301.80>80.00 (-) 2.79e5



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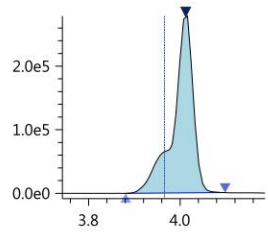

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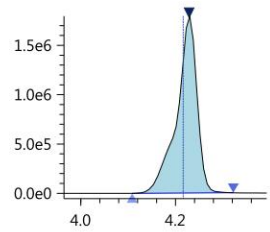
ISTD 314.90>270.10 (-) 1.80e6



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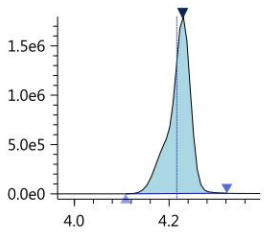

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Conc 1.0226
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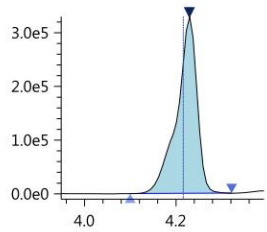
Q 313.00>269.00 (-) 3.30e5



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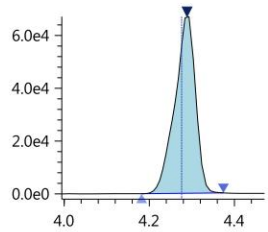
RT 4.289 Area 227376
Q 329.00>169.00 (-) 6.71e4



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Conc 5.0000
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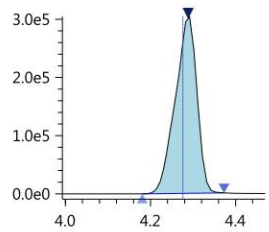
ISTD 332.00>286.80 (-) 3.05e5



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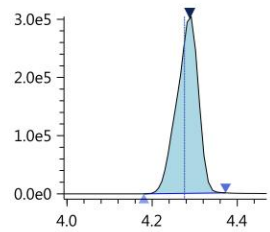

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4_2-FTS-13C_IS
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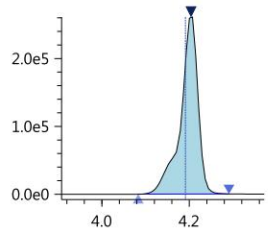
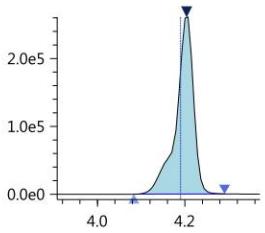
ISTD 328.80>309.05 (-) 2.61e5



4_2-FTS-13C
Conc 5.0430
RT 4.204 Area 720299
Q 328.80>309.05 (-) 2.61e5



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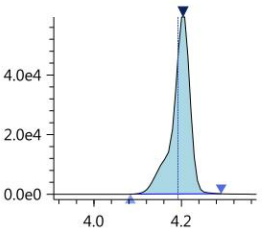
Q 327.00>307.05 (-) 5.95e4



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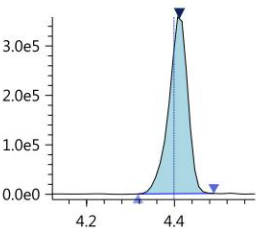
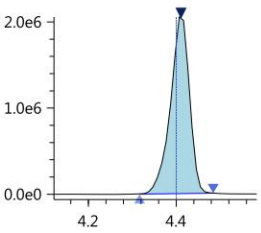
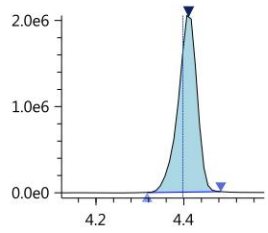
RT 4.411 Area 1083606
Q 362.90>319.00 (-) 3.59e5



PFHpA-13C_IS
Conc 5.0000
RT 4.411 Area 6216963
ISTD 366.90>322.10 (-) 2.06e6



PFHpA-13C
Conc 5.5254
RT 4.411 Area 6216963
Q 366.90>322.10 (-) 2.06e6



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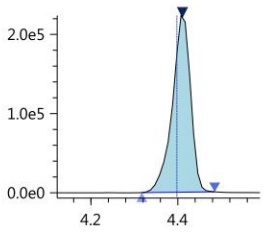
Conc 5.0000
RT 4.411 Area 654976
ISTD 402.70>84.05 (-) 2.24e5



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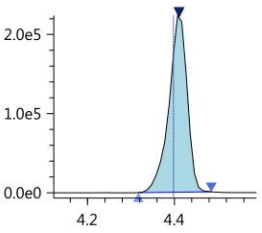
Conc 5.9398
RT 4.411 Area 654976
Q 402.70>84.05 (-) 2.24e5



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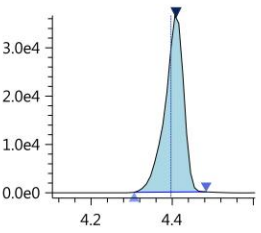
Conc 0.8227
RT 4.410 Area 117268
Q 399.00>80.00 (-) 3.67e4



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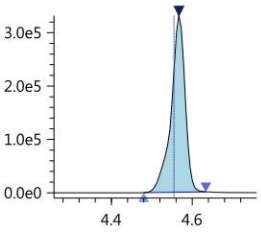
Conc 6.3028
RT 4.567 Area 796396
Q 428.90>409.00 (-) 3.32e5



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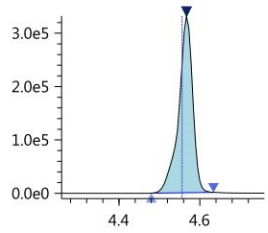
ISTD 428.90>409.00 (-) 3.32e5



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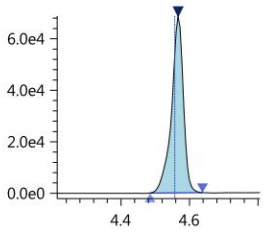
RT 4.567 Area 165160
Q 427.00>407.00 (-) 6.88e4



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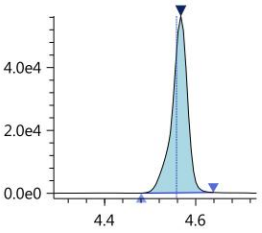
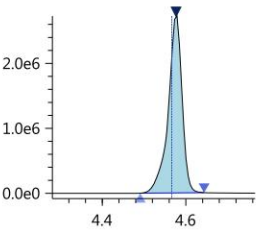
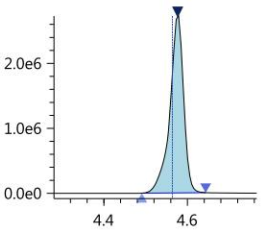
RT 4.567 Area 132209
Q 449.00>80.15 (-) 5.64e4



PFOA-13C_IS
Conc 5.0000
RT 4.576 Area 6267374
ISTD 416.80>372.05 (-) 2.73e6



PFOA-13C
Conc 5.5883
RT 4.576 Area 6267374
Q 416.80>372.05 (-) 2.73e6



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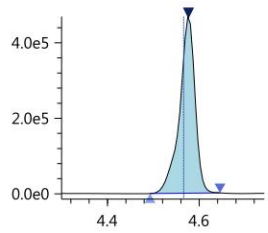
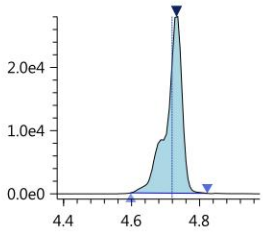
RT 4.576 Area 1098943
Q 413.00>369.00 (-) 4.70e5



PFOS_1
Conc 0.8530
RT 4.732 Area 89758
Q 499.00>80.00 (-) 2.80e4



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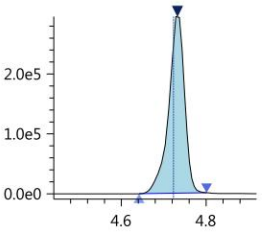
ISTD 502.80>80.05 (-) 2.96e5



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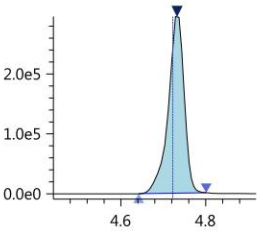

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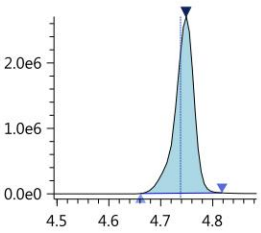
RT 4.749 Area 6743721
ISTD 467.80>423.00 (-) 2.71e6



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PFNA-13C
Conc 5.3612
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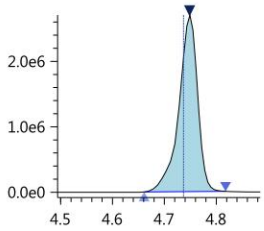
Q 467.80>423.00 (-) 2.71e6



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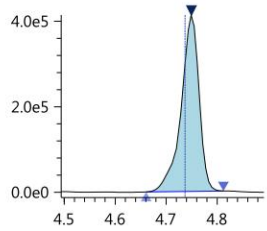
RT 4.750 Area 1011152
Q 463.00>418.90 (-) 4.15e5



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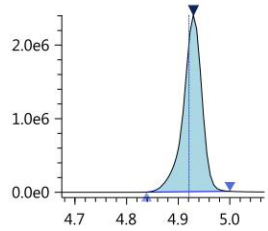
ISTD 514.80>469.95 (-) 2.41e6



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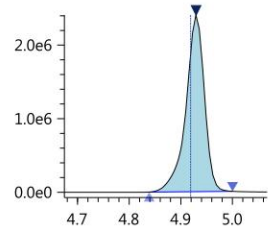

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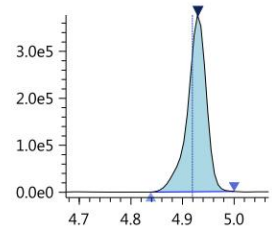

8_2-FTS-13C_IS
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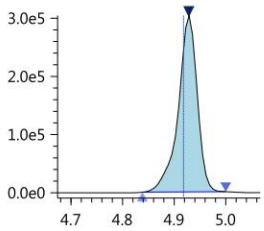
ISTD 528.80>509.00 (-) 3.05e5



8_2-FTS-13C
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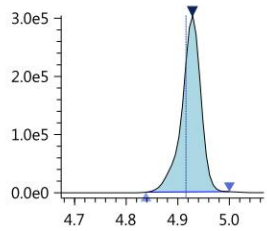
Q 528.80>509.00 (-) 3.05e5



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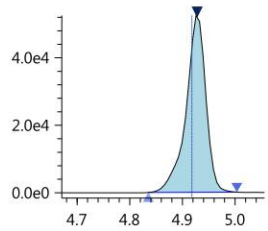
Q 527.10>506.90 (-) 5.25e4



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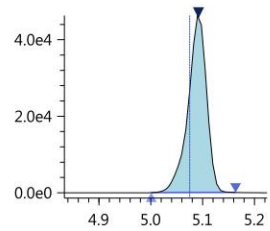
Q 599.00>79.90 (-) 4.63e4



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Conc 1.0665
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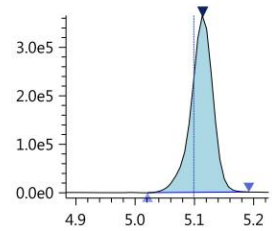
Q 563.00>518.90 (-) 3.66e5



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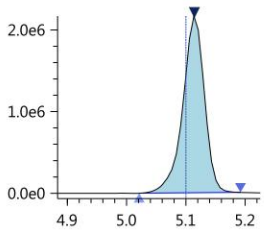
Conc 5.0000
RT 5.114 Area 5491370
ISTD 564.80>519.95 (-) 2.17e6



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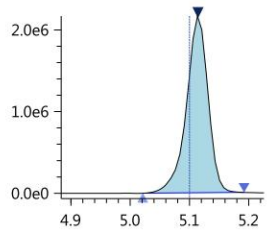
Q 564.80>519.95 (-) 2.17e6



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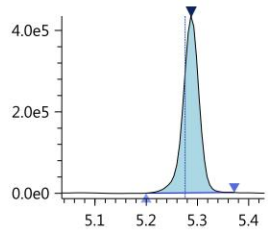
Conc 1.0006
RT 5.288 Area 949669
Q 613.05>569.00 (-) 4.35e5



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Conc 5.0516
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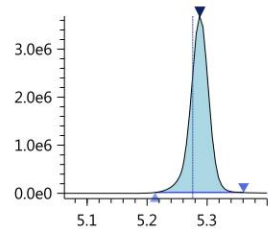
Q 614.80>569.95 (-) 3.69e6



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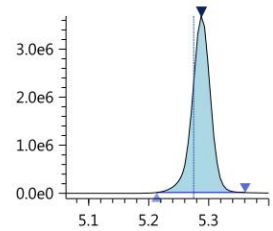

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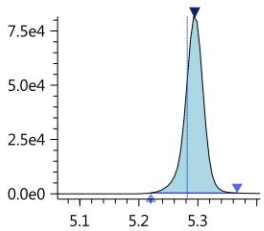
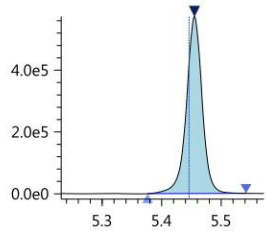
Conc 0.9817
RT 5.295 Area 175263
Q 627.00>606.95 (-) 8.16e4



PFTrDA
Conc 0.9970
RT 5.455 Area 1058576
Q 663.00>618.90 (-) 5.73e5



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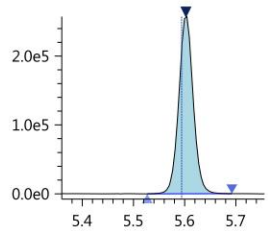
Conc 1.1178
RT 5.602 Area 509753
Q 713.40>669.00 (-) 2.57e5



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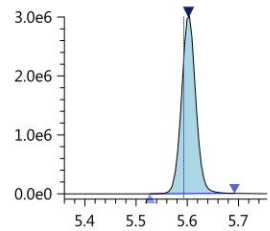
Q 714.70>669.90 (-) 3.01e6



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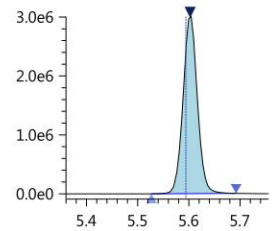

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FOSA-13C_IS
Conc 5.0000
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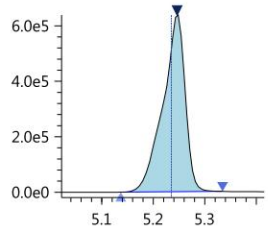
ISTD 506.00>78.05 (-) 6.39e5



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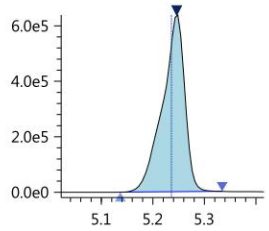
Q 506.00>78.05 (-) 6.39e5



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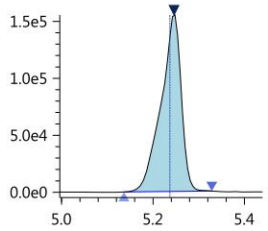
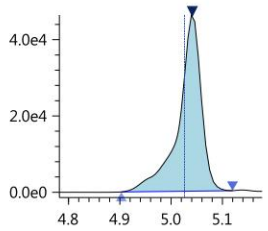
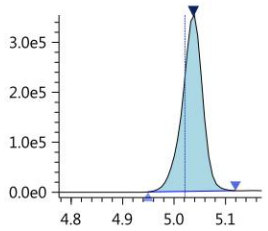
Conc 0.9465
RT 5.246 Area 474946
Q 498.20>78.00 (-) 1.56e5



N-MeFOSAA
Conc 1.1711
RT 5.041 Area 140665
Q 570.20>419.00 (-) 4.65e4



N-MeFOSAA-d3
Conc 3.3416
RT 5.038 Area 974052
Q 572.80>419.05 (-) 3.55e5



N-MeFOSAA-d3_IS
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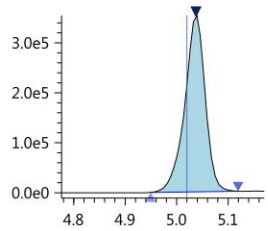
ISTD 572.80>419.05 (-) 3.55e5



N-MeFOSA-d3_IS
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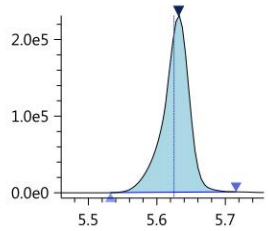
RT 5.632 Area 589082
ISTD 514.90>168.90 (-) 2.31e5



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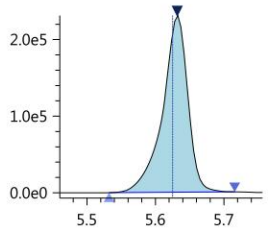
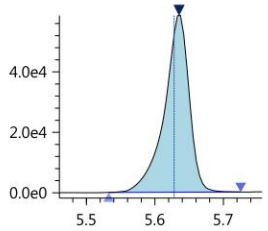
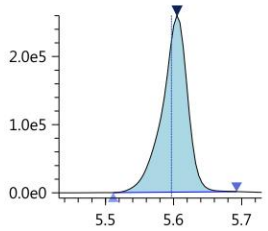
RT 5.632 Area 589082
Q 514.90>168.90 (-) 2.31e5



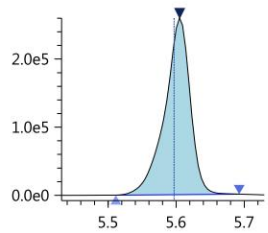
N-MeFOSA
Conc 1.0534
RT 5.635 Area 147021
Q 512.00>169.10 (-) 5.87e4



N-MeFOSE-d7
Conc 4.3597
RT 5.605 Area 669226
Q 622.70>59.10 (-) 2.60e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.605 Area 669226
ISTD 622.70>59.10 (-) 2.60e5



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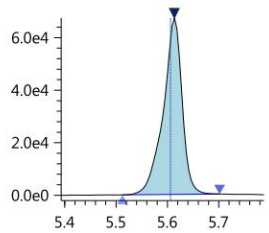
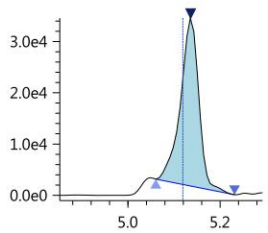
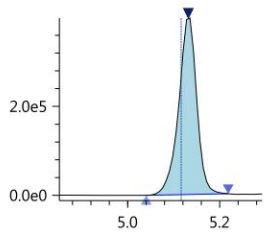
Conc 0.9884
RT 5.613 Area 170851
Q 616.00>59.00 (-) 6.75e4



N-EtFOSAA
Conc 0.7137
RT 5.136 Area 90780
Q 584.20>418.95 (-) 3.46e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.132 Area 1087933
ISTD 588.80>419.00 (-) 3.99e5



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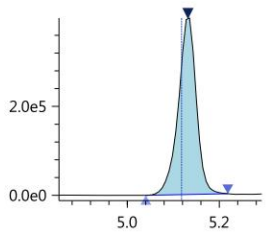
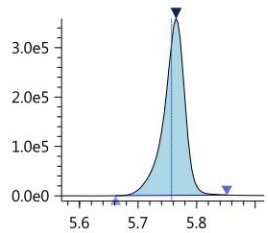
Conc 3.7412
RT 5.132 Area 1087933
Q 588.80>419.00 (-) 3.99e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.765 Area 884871
ISTD 530.90>169.15 (-) 3.59e5



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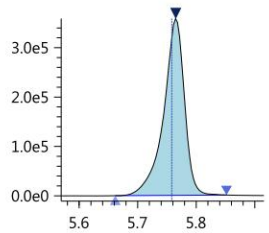
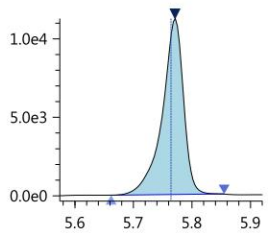
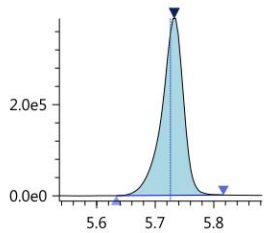
Conc 4.4026
RT 5.765 Area 884871
Q 530.90>169.15 (-) 3.59e5



N-EtFOSA
Conc 0.9562
RT 5.771 Area 28204
Q 526.90>169.10 (-) 1.13e4



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.733 Area 999672
ISTD 638.70>59.10 (-) 3.89e5



N-EtFOSE-d9
Conc 4.7182
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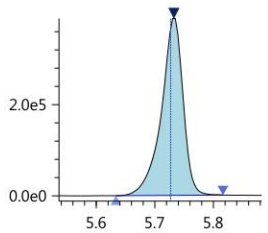
Q 638.70>59.10 (-) 3.89e5



Insight Report

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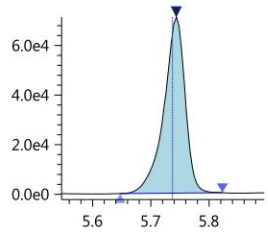
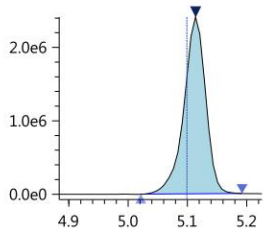
N-EtFOSE

Conc 0.9584
RT 5.744 Area 179526
Q 630.00>58.90 (-) 7.15e4



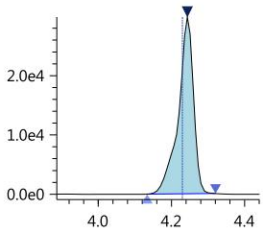
13C7-PFUnDA_IS

Conc 5.0000
RT 5.114 Area 6145462
ISTD 570.00>525.00 (-) 2.41e6



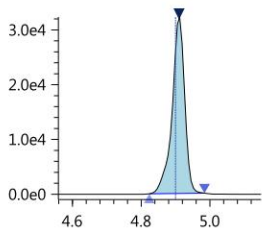
PFPeS

Conc 0.7853
RT 4.244 Area 85305
Q 349.00>99.00 (-) 2.99e4



PFNS

Conc 0.7566
RT 4.910 Area 81806
Q 549.00>99.00 (-) 3.24e4



1st EJD 03/28/19
2nd 03/28/19

Validation Report

Data File: J:\LCMS06\Data\190325_b6\190325_012
Lab ID: KQ1904043-01
RunType: CCV
Matrix: Water

Date Acquired: 3/25/19 11:06
Batch ID: 629106
Analysis Method: PFC/537M/PFOA

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: _____

1st EJD 03/28/19
2nd 03/28/19

Quantitation Report

Data File:	J:\LCMS06\Data\190325_b6\190325_012	**Instrument:**	K-LCMS-06
Acqu Date:	3/25/19 11:06	**Vial:**	1
Run Type:	CCV	**Dilution:**	1
Lab ID:	KQ1904043-01	**Raw Units:**	ng/mL

Bottle ID:		**Tier:**	II	**Matrix:**	Water
Prod Code:	PFOA	**Collect Date:**	2/28/19	**Receive Date:**	3/4/19

Analysis Lot:	629106	**Prep Lot:**		**Report Group:**	KQ1904043
Analysis	PFC/537M	**Prep Method:**			
		Prep Date:			

Title:	Perfluorinated Sulfonic Acids and Perfluorinated Carboxylic Acids by HPLC/MS	**Calibration ID:**	KC1900086
		Report List ID:	19837

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.084		5964715	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
18O2-PFHxS	4.392		736509	6.8816	Y
13C4-PFOS	4.709		714021	5.6232	Y
13C5-PFPeA	3.943		1809026	5.2539	Y
13C2-PFHxA	4.211		5586810	5.2616	Y
13C4-PFHpA	4.392		5846179	5.3533	Y
13C2-6:2 FTS	4.547		716170	5.8396	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorohexane sulfonic acid (PFHxS)	4.390		125567	0.7834	Y
Perfluorooctane sulfonic acid (PFOS)	4.708		85974	0.8838	Y
Perfluoropentanoic acid (PFPeA)	3.943		972109	1.0459	Y
Perfluorohexanoic acid (PFHxA)	4.210		1055651	1.0242	Y
Perfluoroheptanoic acid (PFHpA)	4.392		1015672	1.0655	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.547		151220	0.9985	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

Insight Report

Printed at 3/28/2019 2:02:44 PM

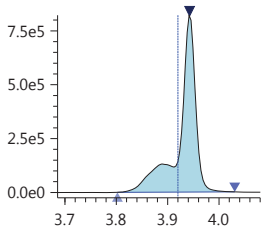
Batch File: ----
Method File: J:\LCMS06\Data\190325_b6\190325_b6.lcm
Project File: J:\LCMS06\Data\190325_b6\190325_b6.damlp
Flags File: J:\LCMS06\Data\190325_b6\190325_b6.damlp

190325_012

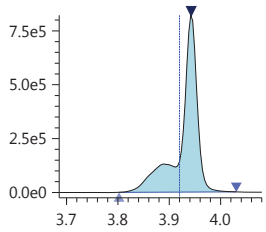
Sample ID: 1.0 PPB CCV
Date acquired: 3/25/2019 11:06:29 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_012.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFPeA-13C_IS	Auto	3.943	1809026	1809026	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.943	1809026	5964715	26	5.2539	ng/mL	5.0000
PFPeA	Auto	3.943	972109	1809026	4	1.0459	ng/mL	1.0000
PFHxA-13C_IS	Auto	4.211	5586810	5586810	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.211	5586810	5964715	26	5.2616	ng/mL	5.0000
PFHxA	Auto	4.210	1055651	5586810	6	1.0242	ng/mL	1.0000
PFHpA	Auto	4.392	1015672	5846179	8	1.0655	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.392	5846179	5846179	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.392	5846179	5964715	26	5.3533	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.392	736509	736509	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.392	736509	5964715	26	6.8816	ng/mL	5.0000
PFHxS_1	Auto	4.390	125567	736509	7	0.7834	ng/mL	0.9131
6_2-FTS-13C	Auto	4.547	716170	5964715	26	5.8396	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.547	716170	716170	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.547	151220	716170	10	0.9985	ng/mL	0.9512
PFOS_1	Auto	4.708	85974	714021	13	0.8838	ng/mL	0.9292
PFOS-13C_IS	Auto	4.709	714021	714021	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.709	714021	5964715	26	5.6232	ng/mL	5.0000
13C7-PFUnDA_IS	Auto	5.084	5964715	5964715	26	5.0000	ng/mL	5.0000

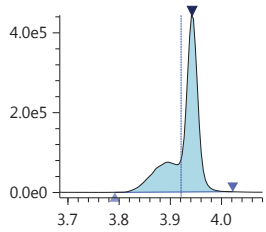
PFPeA-13C_IS
Conc 5.0000
RT 3.943 Area 1809026
ISTD 267.90>223.00 (-) 8.22e5



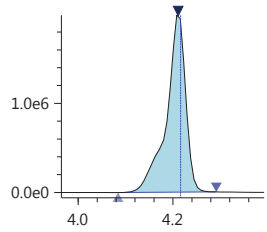
PFPeA-13C
Conc 5.2539
RT 3.943 Area 1809026
Q 267.90>223.00 (-) 8.22e5



PFPeA
Conc 1.0459
RT 3.943 Area 972109
Q 263.05>219.10 (-) 4.44e5



PFHxA-13C_IS
Conc 5.0000
RT 4.211 Area 5586810
ISTD 314.90>270.10 (-) 1.99e6



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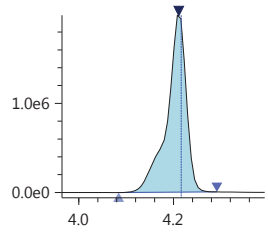
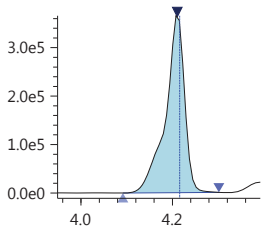
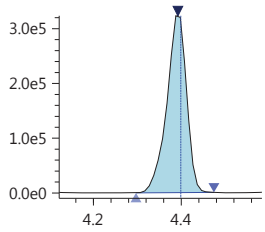
Q 314.90>270.10 (-) 1.99e6



PFHxA
Conc 1.0242
RT 4.210 Area 1055651
Q 313.00>269.00 (-) 3.66e5



PFHpA
Conc 1.0655
RT 4.392 Area 1015672
Q 362.90>319.00 (-) 3.24e5



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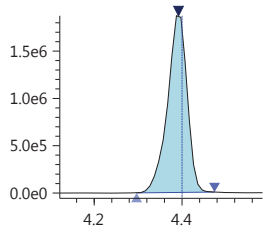
Conc 5.0000
RT 4.392 Area 5846179
ISTD 366.90>322.10 (-) 1.87e6



PFHpA-13C
Conc 5.3533
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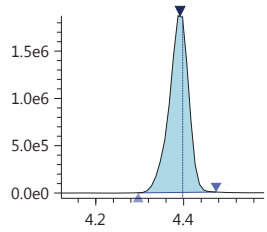
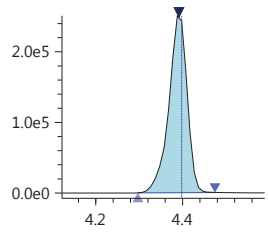
Q 366.90>322.10 (-) 1.87e6



PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 736509
ISTD 402.70>84.05 (-) 2.51e5



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PFHxS-18O
Conc 6.8816
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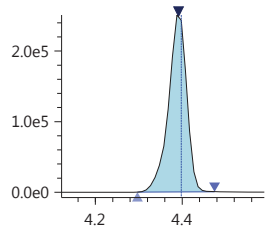
Q 402.70>84.05 (-) 2.51e5



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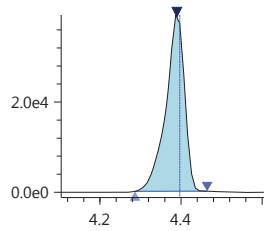
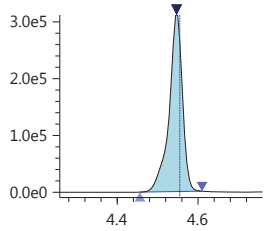
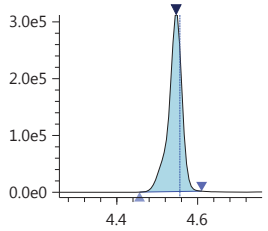
Conc 0.7834
RT 4.390 Area 125567
Q 399.00>80.00 (-) 3.93e4



6_2-FTS-13C
Conc 5.8396
RT 4.547 Area 716170
Q 428.90>409.00 (-) 3.12e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.547 Area 716170
ISTD 428.90>409.00 (-) 3.12e5



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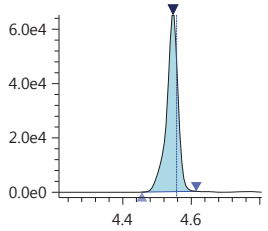
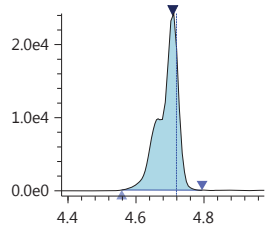
RT 4.547 Area 151220
Q 427.00>407.00 (-) 6.53e4



PFOS_1
Conc 0.8838
RT 4.708 Area 85974
Q 499.00>80.00 (-) 2.43e4



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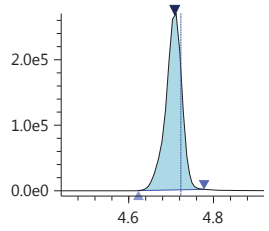
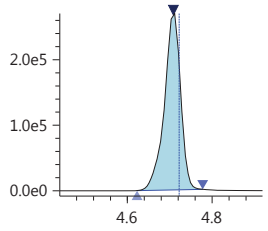
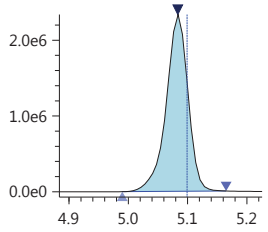
Conc 5.0000
RT 4.709 Area 714021
ISTD 502.80>80.05 (-) 2.71e5



PFOS-13C
Conc 5.6232
RT 4.709 Area 714021
Q 502.80>80.05 (-) 2.71e5



13C7-PFUnDA_IS
Conc 5.0000
RT 5.084 Area 5964715
ISTD 570.00>525.00 (-) 2.34e6



Insight Report

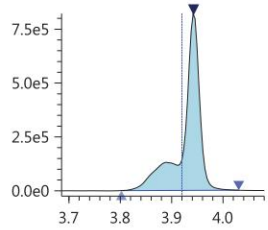
Printed at 3/28/2019 1:52:07 PM

Batch File: ----
Method File: J:\LCMS06\Data\190325_b6\190325_b6.lcm
Project File: J:\LCMS06\Data\190325_b6\190325_b6.damlp
Flags File: J:\LCMS06\Data\190325_b6\190325_b6.damlp

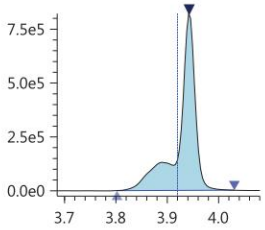
190325_012

Sample ID: 1.0 PPB CCV
Date acquired: 3/25/2019 11:06:29 AM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190325_b6\190325_012.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 1

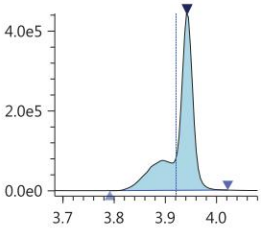
PFPeA-13C_IS
Conc 5.0000
RT 3.943 Area 1809026
ISTD 267.90>223.00 (-) 8.22e5



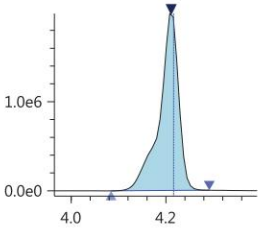
PFPeA-13C
Conc 5.2539
RT 3.943 Area 1809026
Q 267.90>223.00 (-) 8.22e5



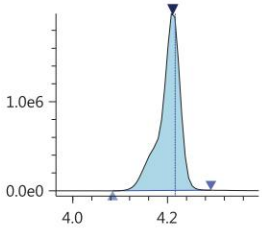
PFPeA
Conc 1.0459
RT 3.943 Area 972109
Q 263.05>219.10 (-) 4.44e5



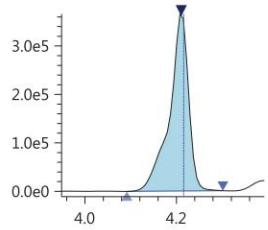
PFHxA-13C_IS
Conc 5.0000
RT 4.211 Area 5586810
ISTD 314.90>270.10 (-) 1.99e6



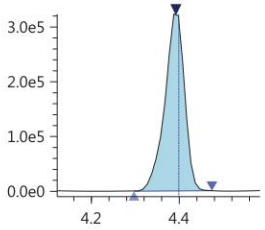
PFHxA-13C
Conc 5.2616
RT 4.211 Area 5586810
Q 314.90>270.10 (-) 1.99e6



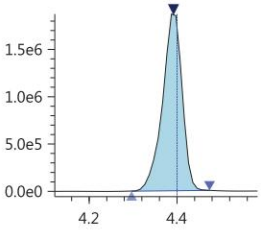
PFHxA
Conc 1.0242
RT 4.210 Area 1055651
Q 313.00>269.00 (-) 3.66e5



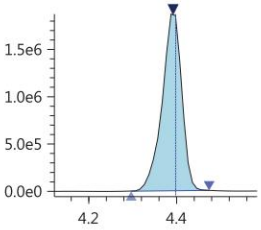
PFHpA
Conc 1.0655
RT 4.392 Area 1015672
Q 362.90>319.00 (-) 3.24e5



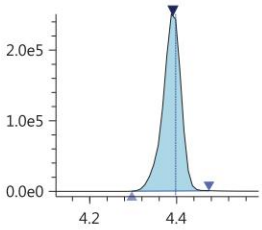
PFHpA-13C_IS
Conc 5.0000
RT 4.392 Area 5846179
ISTD 366.90>322.10 (-) 1.87e6



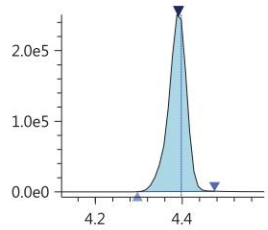
PFHpA-13C
Conc 5.3533
RT 4.392 Area 5846179
Q 366.90>322.10 (-) 1.87e6



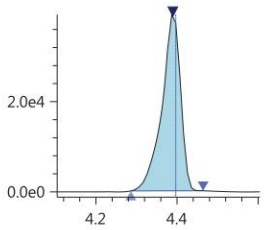
PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 736509
ISTD 402.70>84.05 (-) 2.51e5



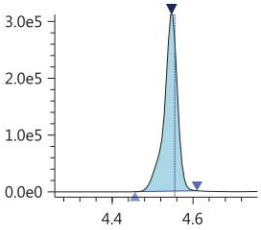
PFHxS-18O
Conc 6.8816
RT 4.392 Area 736509
Q 402.70>84.05 (-) 2.51e5



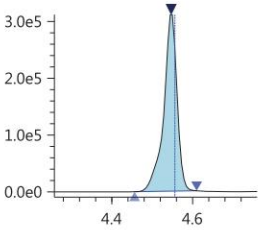
PFHxS_1
Conc 0.7834
RT 4.390 Area 125567
Q 399.00>80.00 (-) 3.93e4



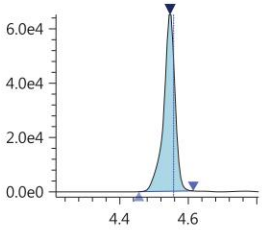
6_2-FTS-13C
Conc 5.8396
RT 4.547 Area 716170
Q 428.90>409.00 (-) 3.12e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.547 Area 716170
ISTD 428.90>409.00 (-) 3.12e5



6_2-FTS_1
Conc 0.9985
RT 4.547 Area 151220
Q 427.00>407.00 (-) 6.53e4

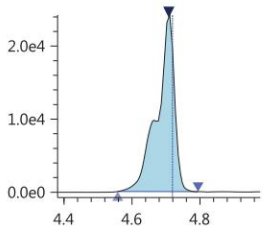


Insight Report

Printed at 3/28/2019 1:52:07 PM

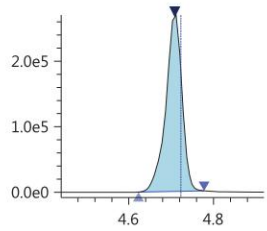
PFOS_1

Conc 0.8838
RT 4.708 Area 85974
Q 499.00>80.00 (-) 2.43e4



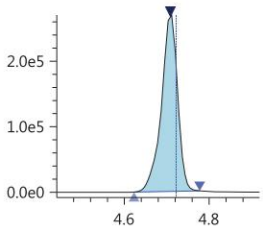
PFOS-13C_IS

Conc 5.0000
RT 4.709 Area 714021
ISTD 502.80>80.05 (-) 2.71e5



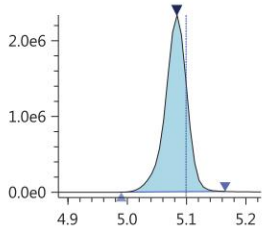
PFOS-13C

Conc 5.6232
RT 4.709 Area 714021
Q 502.80>80.05 (-) 2.71e5



13C7-PFUnDA_IS

Conc 5.0000
RT 5.084 Area 5964715
ISTD 570.00>525.00 (-) 2.34e6



190301_b1

ICAL Date: 3/1/2019
Cal. Std. xp: 6/4/2019
ICAL ID: KC1900086
LIMS ID: 627054

1st Review: CMuller
2nd Review:
LCMS06 -Shimadzu 8050
Column: Phenomenx EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 19-OLC-01-14F **B:** 5mM Ammonium Acetate In MeOH 19-OLC-01-11M

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	IB	19-OLC-01-15I	190301_007	PFAS_121918_CM.lcm	1x	☒	
2	0.05 PPB ICAL	19-OLC-01-15A	190301_008	PFAS_121918_CM.lcm	1x	☒	
3	0.10 PPB ICAL	19-OLC-01-15B	190301_009	PFAS_121918_CM.lcm	1x	☒	
4	0.50 PPB ICAL	19-OLC-01-15C	190301_010	PFAS_121918_CM.lcm	1x	☒	
5	1.0 PPB ICAL	19-OLC-01-15D	190301_011	PFAS_121918_CM.lcm	1x	☒	
6	5.0 PPB ICAL	19-OLC-01-15E	190301_012	PFAS_121918_CM.lcm	1x	☒	
7	10.0 PPB ICAL	19-OLC-01-15F	190301_013	PFAS_121918_CM.lcm	1x	☒	
8	15.0 PPB ICAL	19-OLC-01-15G	190301_014	PFAS_121918_CM.lcm	1x	☒	
9	IB	19-OLC-01-15I	190301_015	PFAS_121918_CM.lcm	1x	☒	
10	1.0 PPB ICV	19-OLC-01-15	190301_016	PFAS_121918_CM.lcm	1x	☒	
11	IB	19-OLC-01-15I	190301_017	PFAS_121918_CM.lcm	1x	☒	
12	T-PFOA	18-OLC-02-43M	190301_018	PFAS_121918_CM.lcm	1x	☒	
13	1.0 PPB CCV	19-OLC-01-11K	190301_056	PFAS_121918_CM.lcm	1x	☒	
14	IB	19-OLC-01-11J	190301_057	PFAS_121918_CM.lcm	1x	☒	
15	KQ1902656-03	MB	190301_058	PFAS_121918_CM.lcm	1x	☒	
16	KQ1902656-01	LCS	190301_059	PFAS_121918_CM.lcm	1x	☒	
17	KQ1902656-02	DLCS	190301_060	PFAS_121918_CM.lcm	1x	☒	
18	K1901761-001		190301_061	PFAS_121918_CM.lcm	1x	☒	
19	K1901761-002		190301_062	PFAS_121918_CM.lcm	1x	☒	
20	K1901761-003		190301_063	PFAS_121918_CM.lcm	1x	☒	
21	K1901745-001		190301_064	PFAS_121918_CM.lcm	1x	☒	Low PFBA, PFPeA, PFHxA surr, High target interference and Matrix. See dilution for PFBS, PFHxS
22	K1901745-002		190301_065	PFAS_121918_CM.lcm	1x	☒	Low PFBA, PFPeA surr, High target intererference and matrix. See dilution for PFBS

J:\LCMS06\Data\190301_b1\190301_b1 injection log

ALS-Kelso
Initial Calibration Checklist OLC MS

Method: PFC/537M
Instrument: LCMS06
Date: 3/4/19

Primary	Secondary				
☐	☐	Tune verification meets SOP criteria?	NA	(Yes)	No
☐	☐	New calibration saved with a unique ID? (.damlp, .rdb) Instrument calibration file name: 190301-01.damLp	NA	(Yes)	No
☐	☐	Calibration performed continuously (i.e. not interrupted by a maintenance event)?	NA	(Yes)	No
☐	☐	All analytes in calibration blank < ½ MRL?	NA	(Yes)	No
☐	☐	Calibration contains minimum number of concentration levels and supports analyte detection limits?	NA	(Yes)	No
☐	☐	Any Internal calibration levels excluded? If yes, include note. _____	NA	Yes	(No)
☐	☐	Correct peaks identified (retention time and mass)?	NA	(Yes)	No
☐	☐	Calibration files quantitated with correct method and analyte list?	NA	(Yes)	No
☐	☐	Primary reviewer must check all integrations electronically. Secondary reviewer checks low and high point electronically.	NA	(Yes)	No
☐	☐	The average RF, COD, and/or calculated concentration meets SOP criteria for all analytes?	NA	(Yes)	No
☐	☐	ICV quantitated against new ICAL and passes SOP criteria?	NA	(Yes)	No
☐	☐	Instrument data uploaded to ALSLIMS calibration module?	NA	(Yes)	No
☐	☐	Verify all analyte names and calibration fits uploaded correctly.	NA	(Yes)	No
☐	☐	All calibration reports printed and included? ICAL SUMMARY, ICAL DETAILED, ICV SUMMARY.	NA	(Yes)	No
☐	☐	All quant reports and manual integrations initialed by primary and secondary reviewers?	NA	(Yes)	No
☐	☐	ALSLIMS calibration electronically approved?	NA	(Yes)	No
☐	☐	ALSLIMS calibration linked to LIMS run?	NA	(Yes)	No

Data packet should be in the following order: Sequence log, Initial Calibration Checklist, ALSLIMS ICAL reports, Instrument calibration reports, and quant reports.

Primary: CMuller Date: 3/4/19

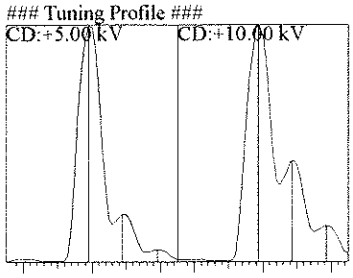
Secondary: A Date: 3/4/19

Sample Information
Sample Type: PEG+PPG+Raffinose

Tuning Condition
Detector Adjustment: Off
Resolution Adjustment: Off
FWHM of Spectrum: 0.70
Sensitivity Adjustment: Off
Mass Calibration: Off

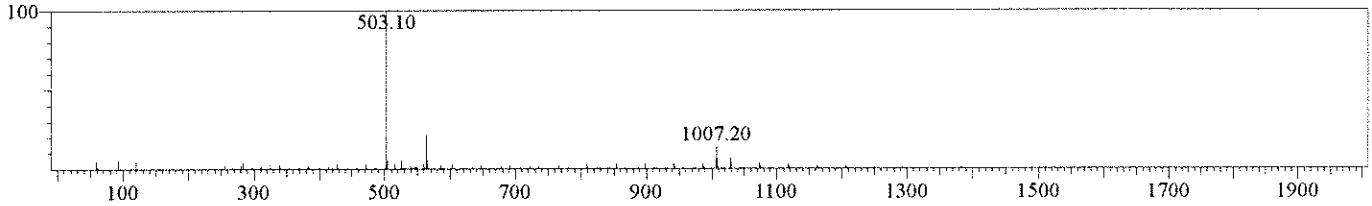
Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 3/1/2019 1:39:27 PM
Acquisition Mode: Q1 Scan(Use CID Gas)

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: 0.92 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 5000
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: -2.00(-2.00) kV
PG Vacuum: 1.5e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile


Int.: 9804569 FWHM: 0.76 m/z : 503.15 Mag.: 2
Int.: 2945315 FWHM: 0.82 m/z : 1007.30 Mag.: 6

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	0.76	9804569
1007.30	1007.20	-0.10	0.82	2945315

DL 0.5
CM
3/4/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+90.0	+130.0	+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

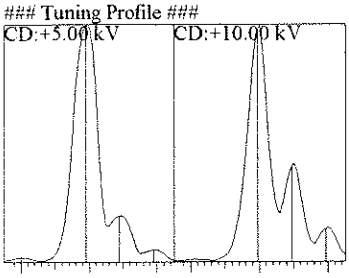
Sample Information
Sample Type: PEG+PPG+Raffinose

Tuning Condition
Detector Adjustment: Off
Resolution Adjustment: Off
FWHM of Spectrum: 0.70
Sensitivity Adjustment: Off
Mass Calibration: Off

Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 3/1/2019 1:42:20 PM
Acquisition Mode: Q3 Scan(Use CID Gas)

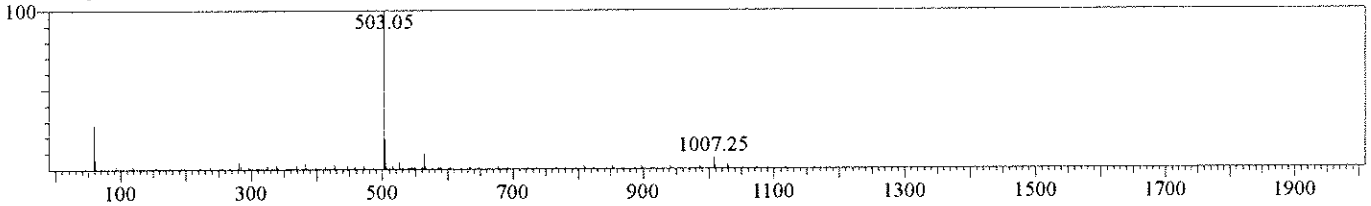
Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 0.00(settings : 10.00) L/min
CID Gas Flow: 270(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.96 uA
DL Temp.: 249(settings : 250) C
Heat Block Temp.: 400(settings : 400) C
Q1 RF Gain: ---
Q1 RF Offset: ---
Q3 RF Gain: 5000
Q3 RF Offset: 5000
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: 3.5 V
Conversion Dynode: +10.00 kV
Detector: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Int.: 8917145 FWHM: 0.80 m/z : 503.15 Mag.: 2
Int.: 1408445 FWHM: 0.67 m/z : 1007.30 Mag.: 13

Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 503.05 (19756514)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15	503.05	-0.10	0.80	8917145
1007.30	1007.25	-0.05	0.67	1408445

D < 0.5
cm ✓
3/4/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+90.0	+130.0	+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

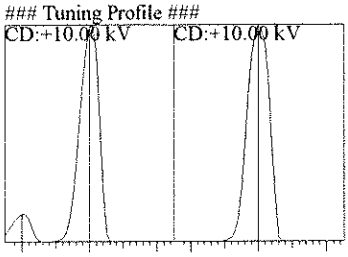
Sample Information
Sample Type: PEG+PPG+Raffinose

Tuning Condition
Detector Adjustment: Off
Resolution Adjustment: Off
FWHM of Spectrum: 0.70
Sensitivity Adjustment: Off
Mass Calibration: Off

Tuning Result
Model: LCMS-8050
Interface: ESI
Polarity: Neg
Tuning Mode: Auto
Tuning Date: 3/1/2019 1:43:47 PM
Acquisition Mode: Product Scan

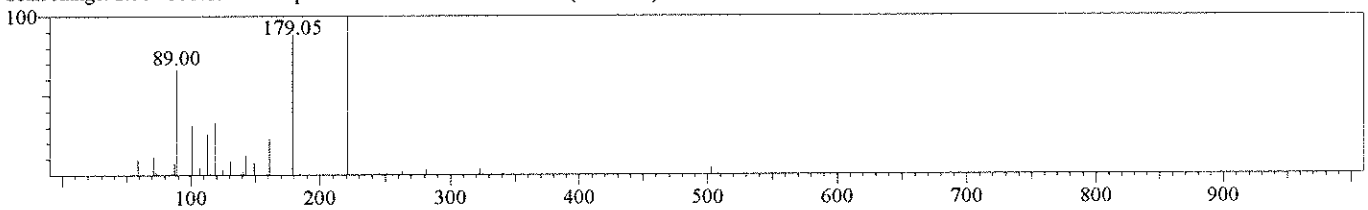
Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
Drying Gas Flow: 0.00(settings : 10.00) L/min
CID Gas Flow: 270(settings : 270) kPa
Interface Bias: -3.00 kV
Interface Current: 0.94 uA
DL Temp.: 250(settings : 250) C
Heat Block Temp.: 399(settings : 400) C
Q1 RF Gain: 5000
Q1 RF Offset: 5000
Q3 RF Gain: 5000
Q3 RF Offset: 5014
Q1 Post-rod Bias: 5.0 V
CID CELL Exit Lens: -0.5 V
Conversion Dynode: +10.00 kV
Detector: -2.00(-2.00) kV
PG Vacuum: 1.4e+002 Pa
IG Vacuum: 2.1e-003 Pa

Tuning Profile



Int.: 1228344	Int.: 1784094
FWHM: 0.65	FWHM: 0.76
m/z : 89.00	m/z : 179.05
Pre m/z: 503.15	Pre m/z: 503.15
Mag.: 16	Mag.: 11

Scan Range: 2.00 - 553.15 Scan Speed: 30 u/s Base Peak: 221.05 (2088965) Pre m/z: 503.15



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15 > 89.00	89.00	0.00	0.65	1228344
503.15 > 179.05	179.05	0.00	0.76	1784094

0.5
cm
3/14/19

		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	+110.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+80.0	+130.0	+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	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6	+0.6
Multipole2 Bias	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Multipole2 Lens	Const	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2	+1.2
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	+100.0	+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

Insight Report

Printed at 3/14/2019 10:19:20 AM

Batch File: ----
Method File: J:\LCMS06\Data\190307_b3_TOPA\190307_b3_TOPA.lcm
Project File: J:\LCMS06\Data\190307_b3_TOPA\190307_b3_TOPA.damlp
Flags File: J:\LCMS06\Data\190307_b3_TOPA\190307_b3_TOPA.damlp

190301_007

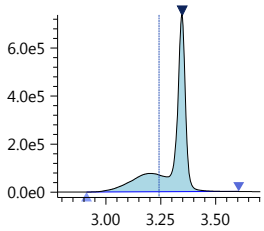
Sample ID: IB
Date acquired: 3/1/2019 4:27:21 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_007.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.348	2714407	2714407	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.348	2714407	6322236	26	4.8213	ng/mL	----
PFBA	ND(W/B)	----	----	2714407	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.945	1757357	1757357	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.945	1757357	6322236	26	4.8152	ng/mL	----
PFPeA	Auto	3.945	99116	1757357	4	-0.0037	ng/mL	----
PFBS_1	Auto	3.997	112	825337	16	0.0006	ng/mL	----
PFBS-13C	Auto	3.999	825337	6322236	26	5.0045	ng/mL	----
PFBS-13C_IS	Auto	3.999	825337	825337	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.212	5591639	5591639	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.212	5591639	6322236	26	4.9683	ng/mL	----
PFHxA	M	4.190	31994	5591639	6	-0.0031	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1218899	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.274	1218899	1218899	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.274	1218899	6322236	26	4.9877	ng/mL	----
4_2-FTS-13C_IS	Auto	4.186	721891	721891	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.186	721891	6322236	26	4.9129	ng/mL	----
4_2-FTS_1	M	4.188	212	721891	5	0.0013	ng/mL	----
PFHpA	Auto	4.381	22425	5197223	8	-0.0125	ng/mL	----
PFHpA-13C_IS	Auto	4.393	5197223	5197223	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.393	5197223	6322236	26	4.4899	ng/mL	----
PFHxS-18O_IS	Auto	4.392	592004	592004	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.392	592004	6322236	26	5.2186	ng/mL	----
PFHxS_1	Auto	4.400	1057	592004	7	0.0082	ng/mL	----
6_2-FTS-13C	Auto	4.552	709177	6322236	26	5.4556	ng/mL	----
6_2-FTS-13C_IS	Auto	4.552	709177	709177	10	5.0000	ng/mL	----
6_2-FTS_1	ND(W/B)	----	----	808239	15	----	ng/mL	----
PFHpS_1	ND(W/B)	----	----	592004	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.561	5776201	5776201	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.561	5776201	6322236	26	5.0064	ng/mL	----
PFOA	Auto	4.545	24988	5776201	9	0.0009	ng/mL	----
PFOS_1	M	4.703	109	707374	13	0.0011	ng/mL	----
PFOS-13C_IS	Auto	4.717	707374	707374	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.717	707374	6322236	26	5.2558	ng/mL	----
PFNA-13C_IS	Auto	4.733	6637606	6637606	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.733	6637606	6322236	26	5.1293	ng/mL	----
PFNA	M	4.712	13273	6637606	11	-0.0022	ng/mL	----
PFDA-13C_IS	Auto	4.921	5944017	5944017	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.921	5944017	6322236	26	4.8692	ng/mL	----
PFDA	M	4.894	16212	5944017	12	0.0167	ng/mL	----
8_2-FTS-13C_IS	Auto	4.920	808239	808239	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.920	808239	6322236	26	5.3292	ng/mL	----
8_2-FTS_1	M	4.915	119	808239	15	0.0008	ng/mL	----
PFDS_1	ND(W/B)	----	----	707374	13	----	ng/mL	----
PFUnA	Auto	5.090	30256	5543015	14	-0.0049	ng/mL	----
PFUnA-13C_IS	Auto	5.098	5543015	5543015	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.098	5543015	6322236	26	5.0465	ng/mL	----
PFDoA	Auto	5.266	13659	8234760	17	0.0036	ng/mL	----
PFDoA-13C	Auto	5.272	8234760	6322236	26	5.1470	ng/mL	----
PFDoA-13C_IS	Auto	5.272	8234760	8234760	17	5.0000	ng/mL	----
10_2-FtS_1	ND(W/B)	----	----	808239	15	----	ng/mL	----
PFTrDA	Auto	5.433	16257	5786225	22	0.0016	ng/mL	----
PFTeDA	Auto	5.584	56217	5786225	22	0.0012	ng/mL	----
PFTeDA-13C	Auto	5.585	5786225	6322236	26	4.8845	ng/mL	----
PFTeDA-13C_IS	Auto	5.585	5786225	5786225	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.234	2016146	2016146	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.234	2016146	6322236	26	4.9063	ng/mL	----
FOSA	M	5.231	957	2016146	18	0.0018	ng/mL	----
N-MeFOSAA	Auto	5.022	871	1498060	19	0.0047	ng/mL	----
N-MeFOSAA-d3	Auto	5.022	1498060	6322236	26	4.9956	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.022	1498060	1498060	19	5.0000	ng/mL	----

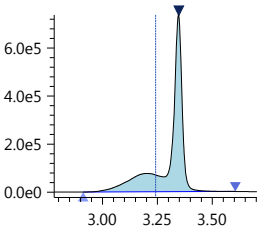
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-MeFOSA-d3_IS	Auto	5.617	724251	724251	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.617	724251	6322236	26	4.8499	ng/mL	----
N-MeFOSA	M	5.612	1209	724251	1	0.0070	ng/mL	----
N-MeFOSE-d7	Auto	5.590	771614	6322236	26	4.8862	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.590	771614	771614	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	771614	20	----	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	1575216	21	----	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.116	1575216	1575216	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.116	1575216	6322236	26	5.2655	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.749	968329	968329	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.749	968329	6322236	26	4.6831	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	968329	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.718	1044942	1044942	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.718	1044942	6322236	26	4.7940	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	1044942	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.098	6322236	6322236	26	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	825337	16	----	ng/mL	----
PFNS	ND(W/B)	----	----	707374	13	----	ng/mL	----

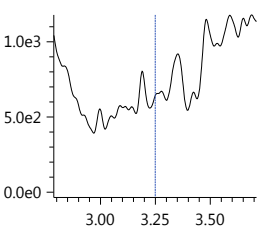
PFBA-13C_IS
Conc 5.0000
RT 3.348 Area 2714407
ISTD 216.90>172.15 (-) 7.38e5



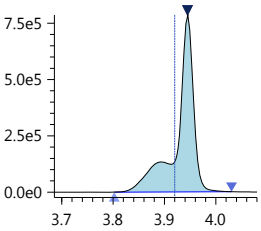
PFBA-13C
Conc 4.8213
RT 3.348 Area 2714407
Q 216.90>172.15 (-) 7.38e5



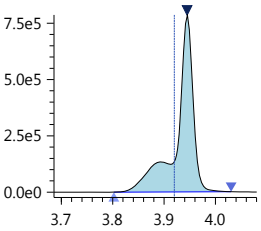
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.18e3



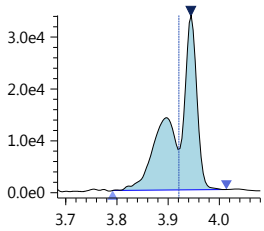
PFPeA-13C_IS
Conc 5.0000
RT 3.945 Area 1757357
ISTD 267.90>223.00 (-) 7.87e5



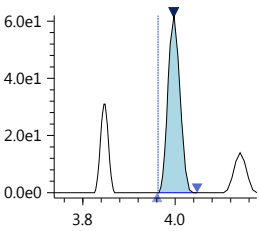
PFPeA-13C
Conc 4.8152
RT 3.945 Area 1757357
Q 267.90>223.00 (-) 7.87e5



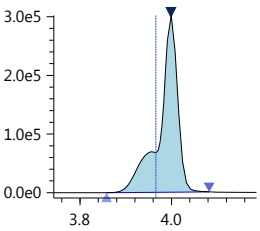
PFPeA
Conc -0.0037
RT 3.945 Area 99116
Q 263.05>219.10 (-) 3.42e4



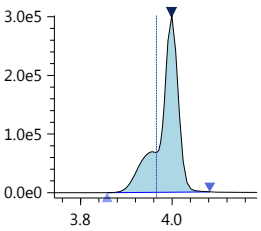
PFBS_1
Conc 0.0006
RT 3.997 Area 112
Q 299.00>80.00 (-) 6.20e1



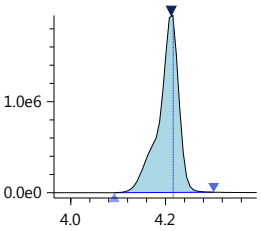
PFBS-13C
Conc 5.0045
RT 3.999 Area 825337
Q 301.80>80.00 (-) 3.02e5



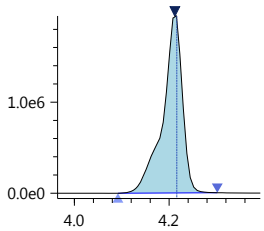
PFBS-13C_IS
Conc 5.0000
RT 3.999 Area 825337
ISTD 301.80>80.00 (-) 3.02e5



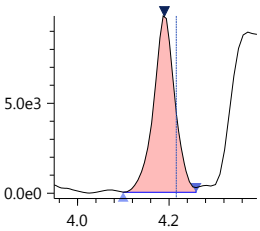
PFHxA-13C_IS
Conc 5.0000
RT 4.212 Area 5591639
ISTD 314.90>270.10 (-) 1.95e6



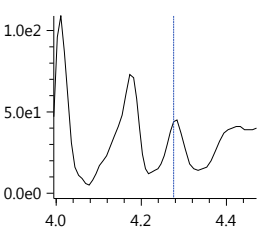
PFHxA-13C
Conc 4.9683
RT 4.212 Area 5591639
Q 314.90>270.10 (-) 1.95e6



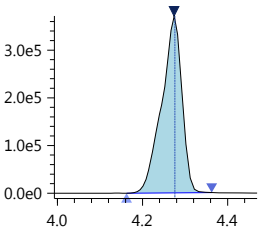
PFHxA
Conc -0.0031
RT 4.190 Area 31994
Q 313.00>269.00 (-) 9.86e3



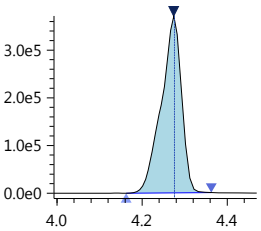
HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 1.09e2



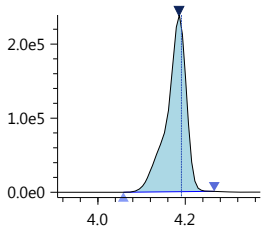
HFPO_DA-13C_IS
Conc 5.0000
RT 4.274 Area 1218899
ISTD 332.00>286.80 (-) 3.72e5



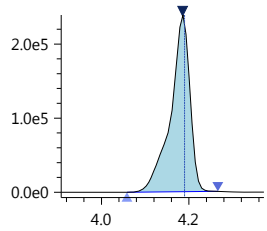
HFPO_DA-13C
Conc 4.9877
RT 4.274 Area 1218899
Q 332.00>286.80 (-) 3.72e5



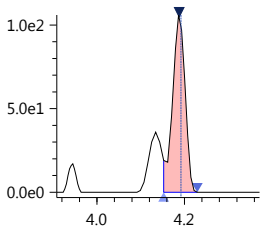
4_2-FTS-13C_IS
Conc 5.0000
RT 4.186 Area 721891
ISTD 328.80>309.05 (-) 2.39e5



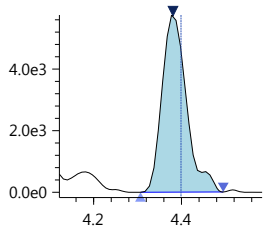
4_2-FTS-13C
Conc 4.9129
RT 4.186 Area 721891
Q 328.80>309.05 (-) 2.39e5



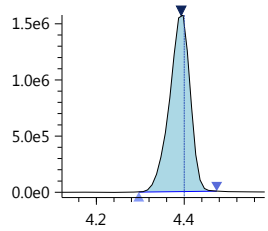
4_2-FTS_1
Conc 0.0013
RT 4.188 Area 212
Q 327.00>307.05 (-) 1.06e2



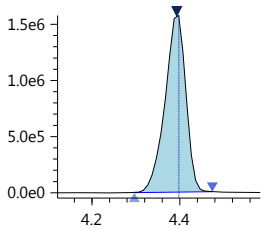
PFHpA
Conc -0.0125
RT 4.381 Area 22425
Q 362.90>319.00 (-) 5.76e3



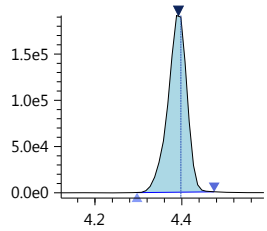
PFHpA-13C_IS
Conc 5.0000
RT 4.393 Area 5197223
ISTD 366.90>322.10 (-) 1.58e6



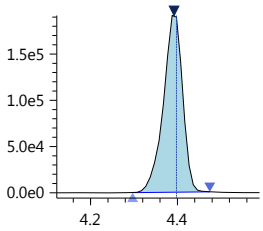
PFHpA-13C
Conc 4.4899
RT 4.393 Area 5197223
Q 366.90>322.10 (-) 1.58e6



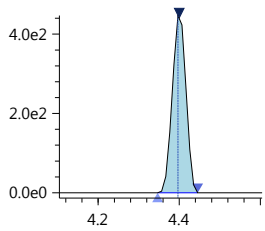
PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 592004
ISTD 402.70>84.05 (-) 1.92e5



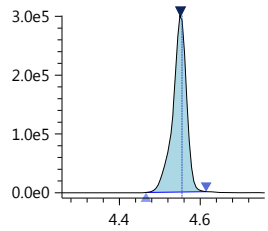
PFHxS-18O
Conc 5.2186
RT 4.392 Area 592004
Q 402.70>84.05 (-) 1.92e5



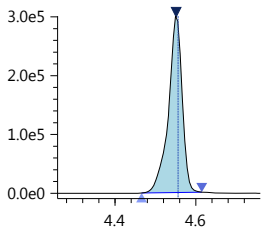
PFHxS_1
Conc 0.0082
RT 4.400 Area 1057
Q 399.00>80.00 (-) 4.47e2



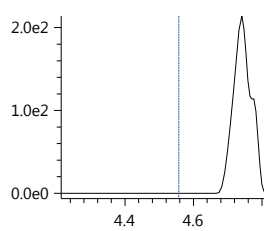
6_2-FTS-13C
Conc 5.4556
RT 4.552 Area 709177
Q 428.90>409.00 (-) 3.01e5



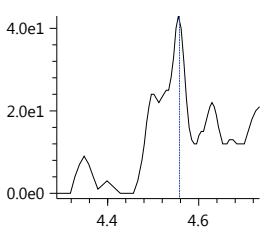
6_2-FTS-13C_IS
Conc 5.0000
RT 4.552 Area 709177
ISTD 428.90>409.00 (-) 3.01e5



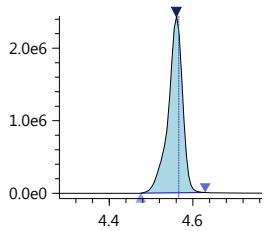
6_2-FTS_1
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-) 2.14e2



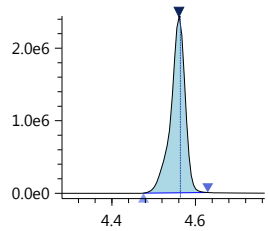
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 4.30e1



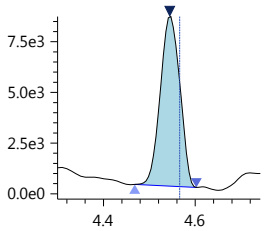
PFOA-13C_IS
Conc 5.0000
RT 4.561 Area 5776201
ISTD 416.80>372.05 (-) 2.44e6



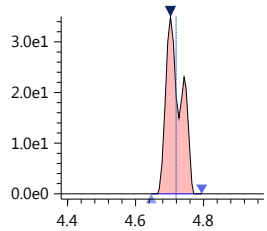
PFOA-13C
Conc 5.0064
RT 4.561 Area 5776201
Q 416.80>372.05 (-) 2.44e6



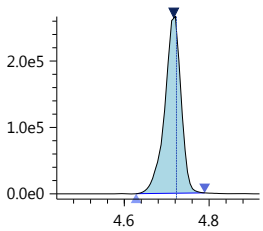
PFOA
Conc 0.0009
RT 4.545 Area 24988
Q 413.00>369.00 (-) 8.74e3



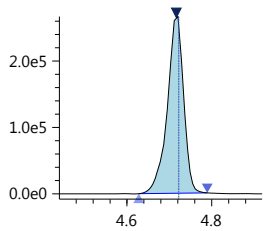
PFOS_1
Conc 0.0011
RT 4.703 Area 109
Q 499.00>80.00 (-) 3.50e1



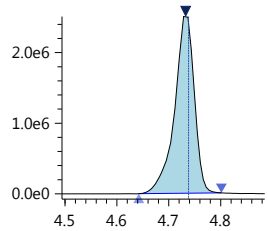
PFOS-13C_IS
Conc 5.0000
RT 4.717 Area 707374
ISTD 502.80>80.05 (-) 2.67e5



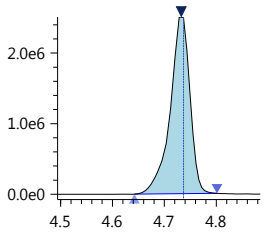
PFOS-13C
Conc 5.2558
RT 4.717 Area 707374
Q 502.80>80.05 (-) 2.67e5



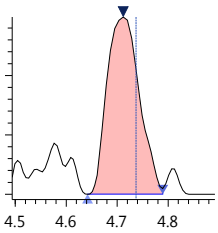
PFNA-13C_IS
Conc 5.0000
RT 4.733 Area 6637606
ISTD 467.80>423.00 (-) 2.51e6



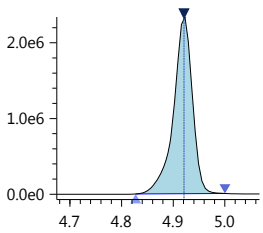
PFNA-13C
Conc 5.1293
RT 4.733 Area 6637606
Q 467.80>423.00 (-) 2.51e6



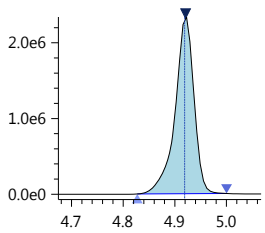
PFNA
Conc -0.0022
RT 4.712 Area 13273
Q 463.00>418.90 (-) 2.99e3



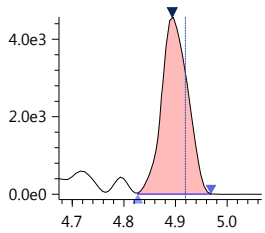
PFDA-13C_IS
Conc 5.0000
RT 4.921 Area 5944017
ISTD 514.80>469.95 (-) 2.34e6



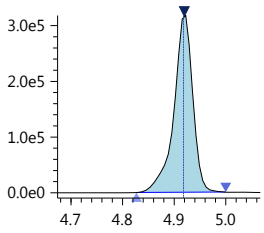
PFDA-13C
Conc 4.8692
RT 4.921 Area 5944017
Q 514.80>469.95 (-) 2.34e6



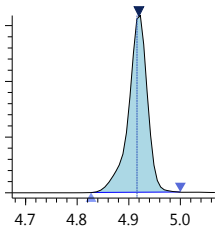
PFDA
Conc 0.0167
RT 4.894 Area 16212
Q 513.00>468.80 (-) 4.57e3



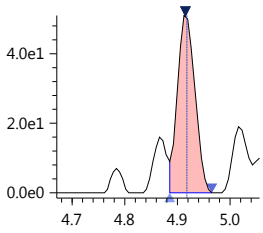
8_2-FTS-13C_IS
Conc 5.0000
RT 4.920 Area 808239
ISTD 528.80>509.00 (-) 3.18e5



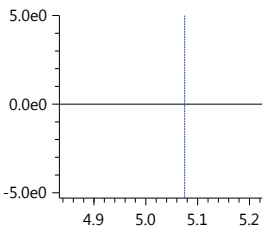
8_2-FTS-13C
Conc 5.3292
RT 4.920 Area 808239
Q 528.80>509.00 (-) 3.18e5



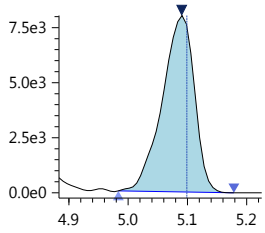
8_2-FTS_1
Conc 0.0008
RT 4.915 Area 119
Q 527.10>506.90 (-) 5.10e1



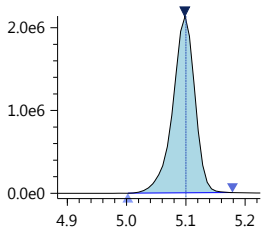
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



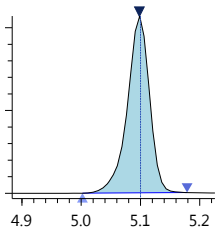
PFUnA
Conc -0.0049
RT 5.090 Area 30256
Q 563.00>518.90 (-) 8.05e3



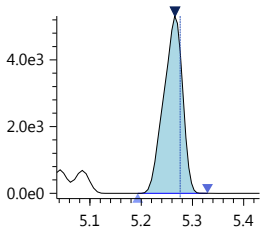
PFUnA-13C_IS
Conc 5.0000
RT 5.098 Area 5543015
ISTD 564.80>519.95 (-) 2.14e6



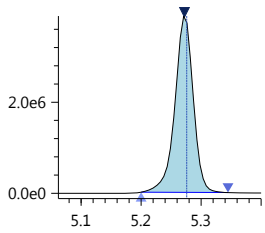
PFUnA-13C
Conc 5.0465
RT 5.098 Area 5543015
Q 564.80>519.95 (-) 2.14e6



PFDoA
Conc 0.0036
RT 5.266 Area 13659
Q 613.05>569.00 (-) 5.31e3



PFDoA-13C
Conc 5.1470
RT 5.272 Area 8234760
Q 614.80>569.95 (-) 3.89e6



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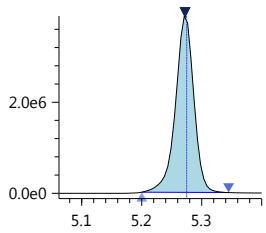
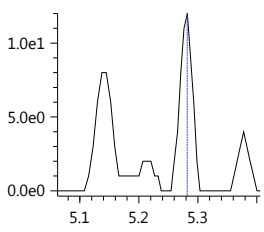
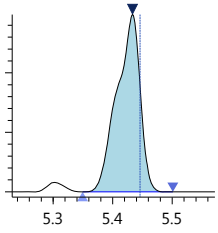
Conc 5.0000
RT 5.272 Area 8234760
ISTD 614.80>569.95 (-) 3.89e6



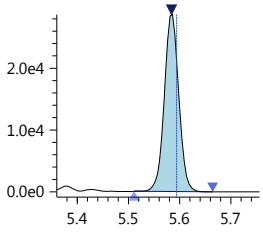
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.20e1



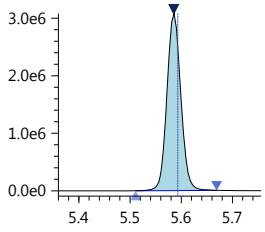
PFTrDA
Conc 0.0016
RT 5.433 Area 16257
Q 663.00>618.90 (-) 5.96e3



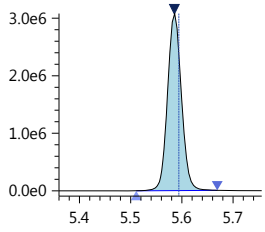
PFTeDA
Conc 0.0012
RT 5.584 Area 56217
Q 713.40>669.00 (-) 2.87e4



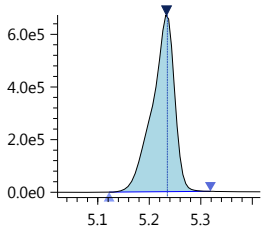
PFTeDA-13C
Conc 4.8845
RT 5.585 Area 5786225
Q 714.70>669.90 (-) 3.08e6



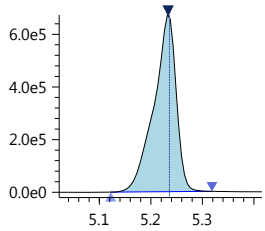
PFTeDA-13C_IS
Conc 5.0000
RT 5.585 Area 5786225
ISTD 714.70>669.90 (-) 3.08e6



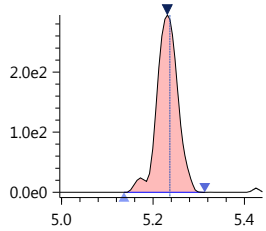
FOSA-13C_IS
Conc 5.0000
RT 5.234 Area 2016146
ISTD 506.00>78.05 (-) 6.73e5



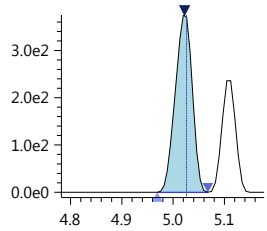
FOSA-13C
Conc 4.9063
RT 5.234 Area 2016146
Q 506.00>78.05 (-) 6.73e5



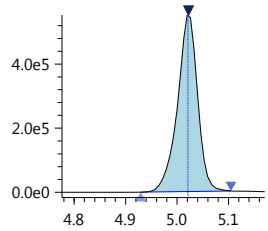
FOSA
Conc 0.0018
RT 5.231 Area 957
Q 498.20>78.00 (-) 2.95e2



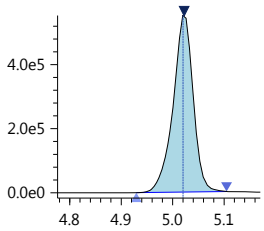
N-MeFOSAA
Conc 0.0047
RT 5.022 Area 871
Q 570.20>419.00 (-) 3.75e2



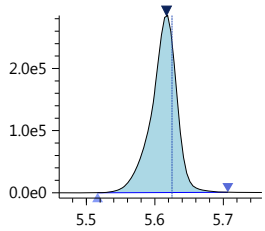
N-MeFOSAA-d3
Conc 4.9956
RT 5.022 Area 1498060
Q 572.80>419.05 (-) 5.53e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.022 Area 1498060
ISTD 572.80>419.05 (-) 5.53e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 724251
ISTD 514.90>168.90 (-) 2.85e5



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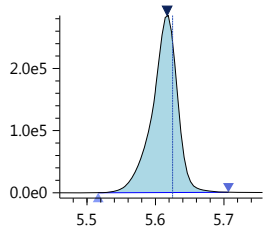
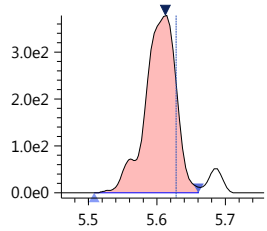
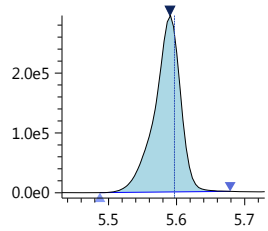
Conc 4.8499
RT 5.617 Area 724251
Q 514.90>168.90 (-) 2.85e5



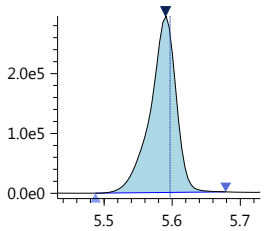
N-MeFOSA
Conc 0.0070
RT 5.612 Area 1209
Q 512.00>169.10 (-) 3.78e2



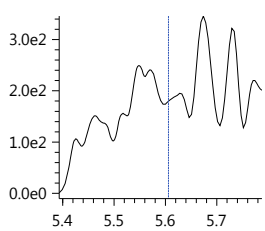
N-MeFOSE-d7
Conc 4.8862
RT 5.590 Area 771614
Q 622.70>59.10 (-) 2.96e5



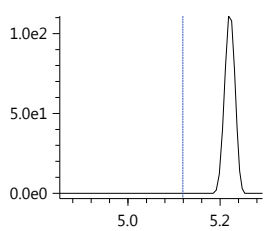
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.590 Area 771614
ISTD 622.70>59.10 (-) 2.96e5



N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 3.46e2



N-EtFOSAA
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-) 1.11e2



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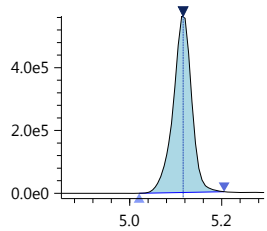
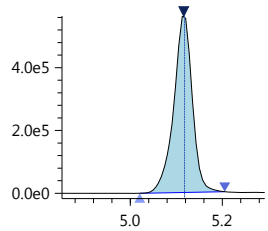
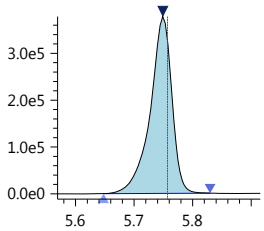
Conc 5.0000
RT 5.116 Area 1575216
ISTD 588.80>419.00 (-) 5.64e5



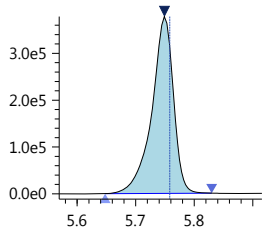
N-EtFOSAA-d5
Conc 5.2655
RT 5.116 Area 1575216
Q 588.80>419.00 (-) 5.64e5



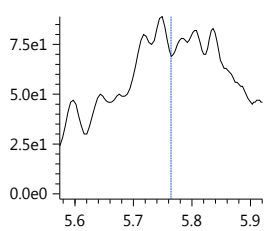
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.749 Area 968329
ISTD 530.90>169.15 (-) 3.79e5



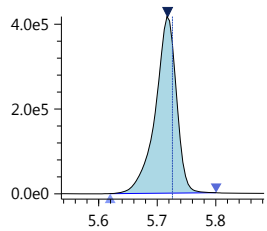
N-EtFOSA-d9
Conc 4.6831
RT 5.749 Area 968329
Q 530.90>169.15 (-) 3.79e5



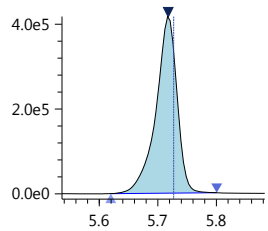
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 8.90e1



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.718 Area 1044942
ISTD 638.70>59.10 (-) 4.18e5



N-EtFOSE-d9
Conc 4.7940
RT 5.718 Area 1044942
Q 638.70>59.10 (-) 4.18e5

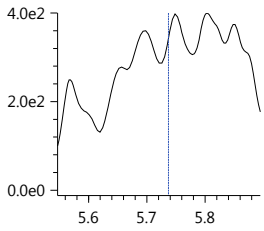


N-EtFOSE

Conc ----

RT ---- Area ----

Q 630.00>58.90 (-) 4.00e2

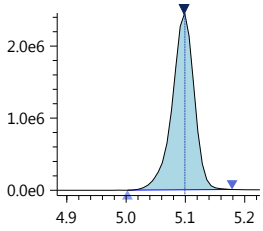


13C7-PFUnDA_IS

Conc 5.0000

RT 5.098 Area 6322236

ISTD 570.00>525.00 (-) 2.46e6

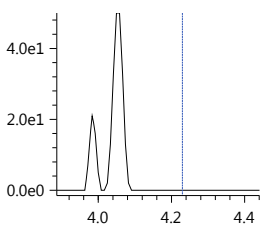


PFPeS

Conc ----

RT ---- Area ----

Q 349.00>99.00 (-) 5.00e1

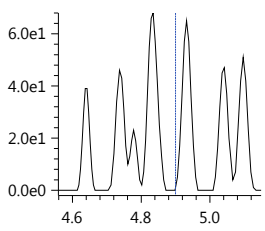


PFNS

Conc ----

RT ---- Area ----

Q 549.00>99.00 (-) 6.80e1



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190301_007

Sample ID: IB
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Acquired by: System Administrator
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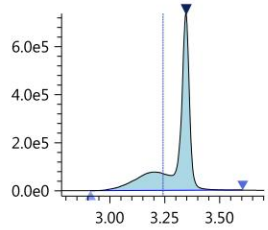
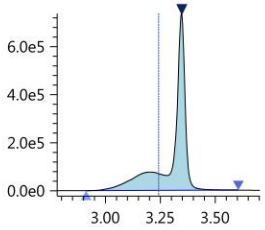
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

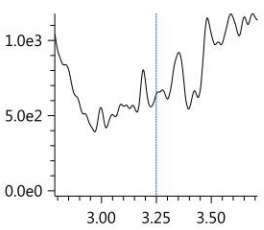
PFBA-13C_IS
Conc 5.0000
RT 3.348 Area 2714407
ISTD 216.90>172.15 (-) 7.38e5



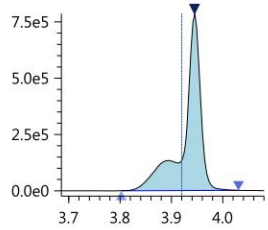
PFBA-13C
Conc 4.8213
RT 3.348 Area 2714407
Q 216.90>172.15 (-) 7.38e5



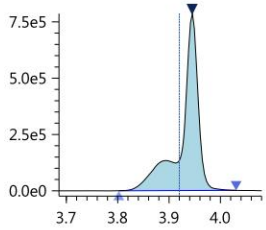
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.18e3



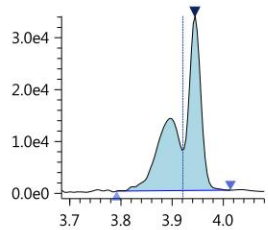
PFPeA-13C_IS
Conc 5.0000
RT 3.945 Area 1757357
ISTD 267.90>223.00 (-) 7.87e5



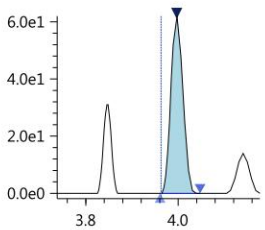
PFPeA-13C
Conc 4.8152
RT 3.945 Area 1757357
Q 267.90>223.00 (-) 7.87e5



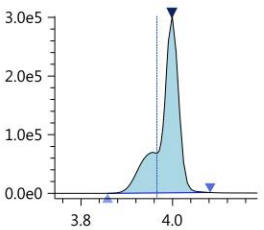
PFPeA
Conc 0.0767
RT 3.945 Area 99116
Q 263.05>219.10 (-) 3.42e4



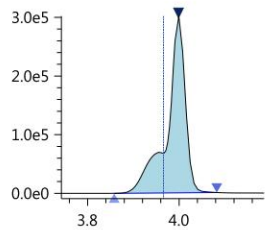
PFBS_1
Conc 0.0007
RT 3.997 Area 112
Q 299.00>80.00 (-) 6.20e1



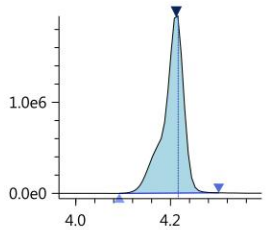
PFBS-13C
Conc 5.0045
RT 3.999 Area 825337
Q 301.80>80.00 (-) 3.02e5



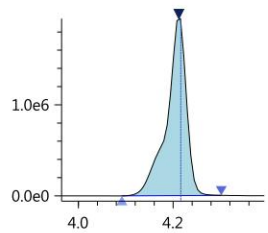
PFBS-13C_IS
Conc 5.0000
RT 3.999 Area 825337
ISTD 301.80>80.00 (-) 3.02e5



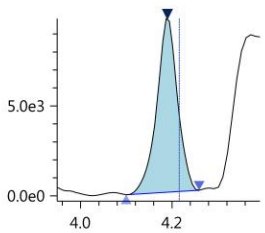
PFHxA-13C_IS
Conc 5.0000
RT 4.212 Area 5591639
ISTD 314.90>270.10 (-) 1.95e6



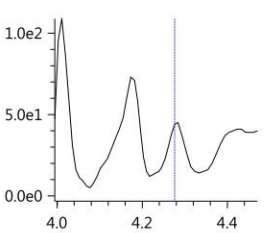
PFHxA-13C
Conc 4.9683
RT 4.212 Area 5591639
Q 314.90>270.10 (-) 1.95e6



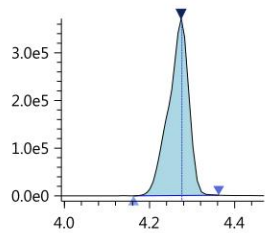
PFHxA
Conc 0.0265
RT 4.190 Area 30702
Q 313.00>269.00 (-) 9.86e3



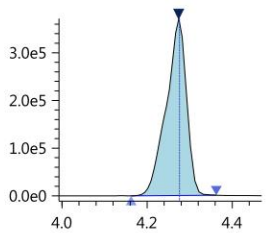
HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 1.09e2



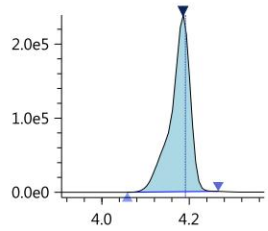
HFPO_DA-13C_IS
Conc 5.0000
RT 4.274 Area 1218899
ISTD 332.00>286.80 (-) 3.72e5



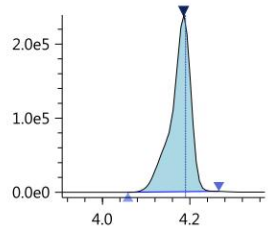
HFPO_DA-13C
Conc 4.9877
RT 4.274 Area 1218899
Q 332.00>286.80 (-) 3.72e5



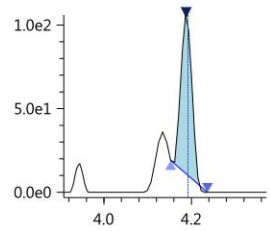
4_2-FTS-13C_IS
Conc 5.0000
RT 4.186 Area 721891
ISTD 328.80>309.05 (-) 2.39e5



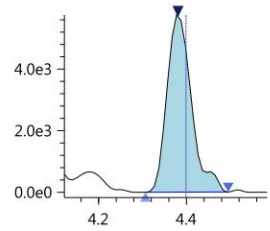
4_2-FTS-13C
Conc 4.9129
RT 4.186 Area 721891
Q 328.80>309.05 (-) 2.39e5



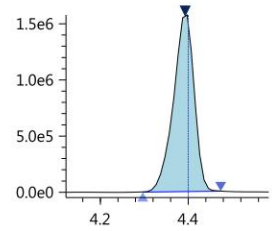
4_2-FTS_1
Conc 0.0010
RT 4.188 Area 164
Q 327.00>307.05 (-) 1.06e2



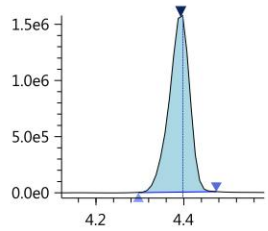
PFHpA
Conc 0.0229
RT 4.381 Area 22425
Q 362.90>319.00 (-) 5.76e3



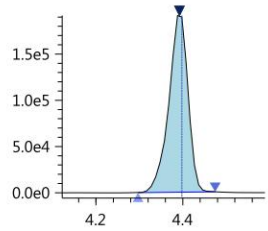
PFHpA-13C_IS
Conc 5.0000
RT 4.393 Area 5197223
ISTD 366.90>322.10 (-) 1.58e6



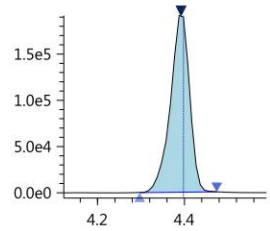
PFHpA-13C
Conc 4.4899
RT 4.393 Area 5197223
Q 366.90>322.10 (-) 1.58e6



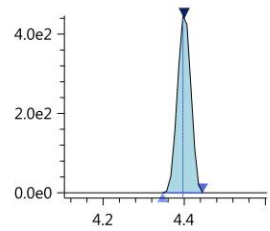
PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 592004
ISTD 402.70>84.05 (-) 1.92e5



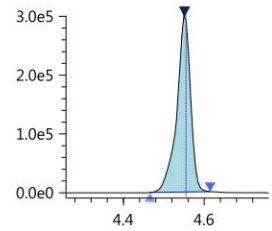
PFHxS-18O
Conc 5.2186
RT 4.392 Area 592004
Q 402.70>84.05 (-) 1.92e5



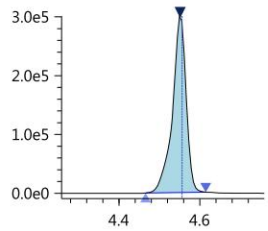
PFHxS_1
Conc 0.0086
RT 4.400 Area 1057
Q 399.00>80.00 (-) 4.47e2



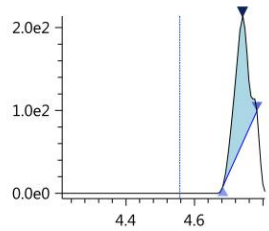
6_2-FTS-13C
Conc 5.4556
RT 4.552 Area 709177
Q 428.90>409.00 (-) 3.01e5



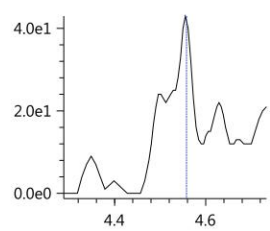
6_2-FTS-13C_IS
Conc 5.0000
RT 4.552 Area 709177
ISTD 428.90>409.00 (-) 3.01e5



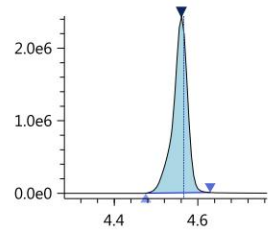
6_2-FTS_1
Conc 0.0028
RT 4.740 Area 411
Q 427.00>407.00 (-) 2.14e2



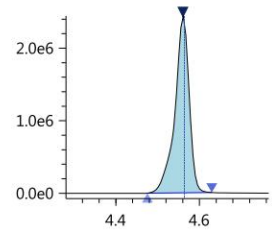
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 4.30e1



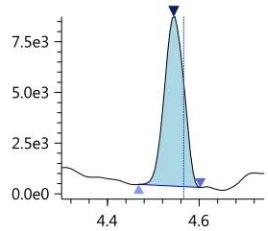
PFOA-13C_IS
Conc 5.0000
RT 4.561 Area 5776201
ISTD 416.80>372.05 (-) 2.44e6



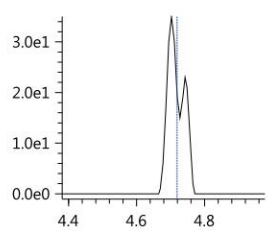
PFOA-13C
Conc 5.0064
RT 4.561 Area 5776201
Q 416.80>372.05 (-) 2.44e6



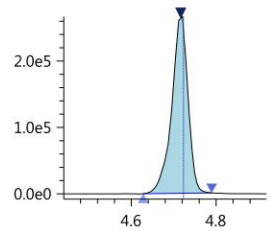
PFOA
Conc 0.0235
RT 4.545 Area 24988
Q 413.00>369.00 (-) 8.74e3



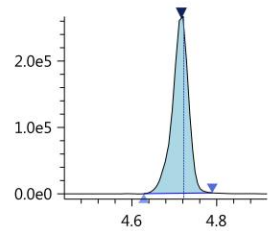
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 3.50e1



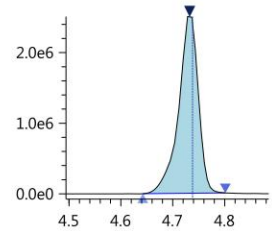
PFOS-13C_IS
Conc 5.0000
RT 4.717 Area 707374
ISTD 502.80>80.05 (-) 2.67e5



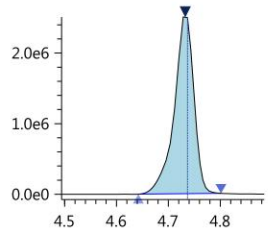
PFOS-13C
Conc 5.2558
RT 4.717 Area 707374
Q 502.80>80.05 (-) 2.67e5



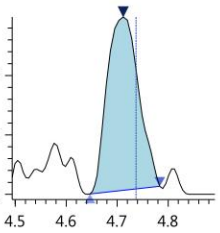
PFNA-13C_IS
Conc 5.0000
RT 4.733 Area 6637606
ISTD 467.80>423.00 (-) 2.51e6



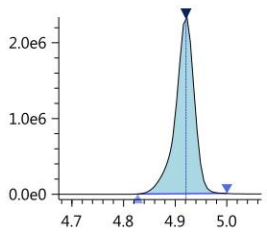
PFNA-13C
Conc 5.1293
RT 4.733 Area 6637606
Q 467.80>423.00 (-) 2.51e6



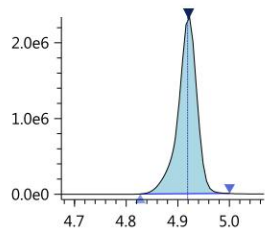
PFNA
Conc 0.0131
RT 4.712 Area 12684
Q 463.00>418.90 (-) 2.99e3



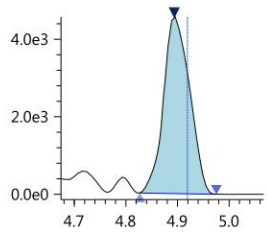
PFDA-13C_IS
Conc 5.0000
RT 4.921 Area 5944017
ISTD 514.80>469.95 (-) 2.34e6



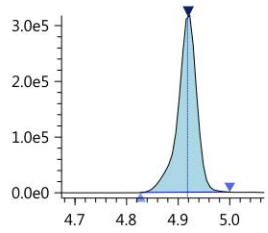
PFDA-13C
Conc 4.8692
RT 4.921 Area 5944017
Q 514.80>469.95 (-) 2.34e6



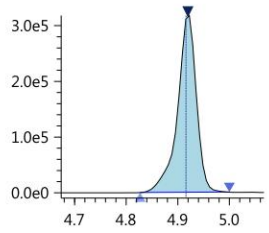
PFDA
Conc 0.0166
RT 4.894 Area 16101
Q 513.00>468.80 (-) 4.57e3



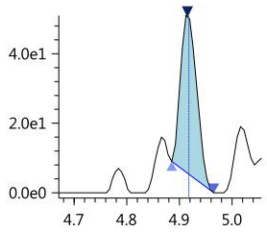
8_2-FTS-13C_IS
Conc 5.0000
RT 4.920 Area 808239
ISTD 528.80>509.00 (-) 3.18e5



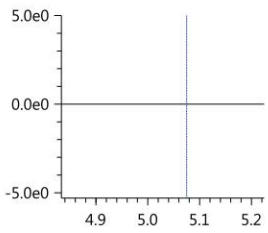
8_2-FTS-13C
Conc 5.3292
RT 4.920 Area 808239
Q 528.80>509.00 (-) 3.18e5



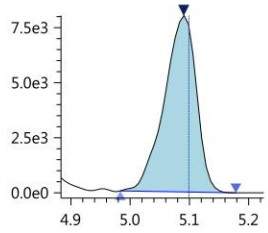
8_2-FTS_1
Conc 0.0006
RT 4.915 Area 98
Q 527.10>506.90 (-) 5.10e1



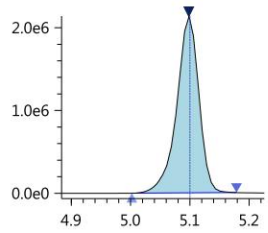
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



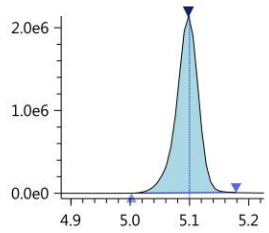
PFUnA
Conc 0.0293
RT 5.090 Area 30256
Q 563.00>518.90 (-) 8.05e3



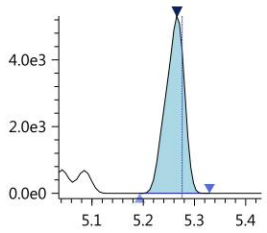
PFUnA-13C_IS
Conc 5.0000
RT 5.098 Area 5543015
ISTD 564.80>519.95 (-) 2.14e6



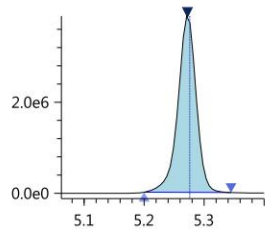
PFUnA-13C
Conc 5.0465
RT 5.098 Area 5543015
Q 564.80>519.95 (-) 2.14e6



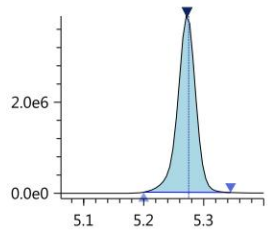
PFDoA
Conc 0.0133
RT 5.266 Area 13659
Q 613.05>569.00 (-) 5.31e3



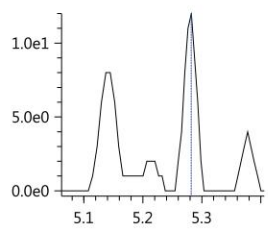
PFDoA-13C
Conc 5.1470
RT 5.272 Area 8234760
Q 614.80>569.95 (-) 3.89e6



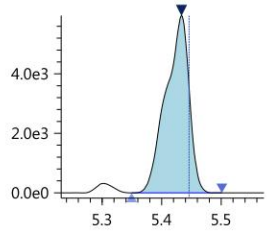
PFDoA-13C_IS
Conc 5.0000
RT 5.272 Area 8234760
ISTD 614.80>569.95 (-) 3.89e6



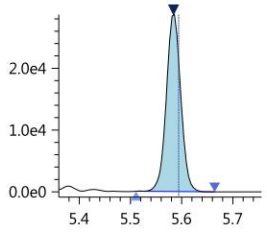
10_2-FtS_1
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-) 1.20e1



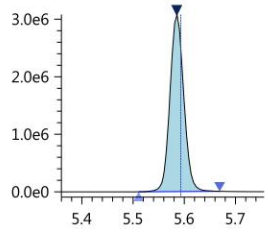
PFTrDA
Conc 0.0147
RT 5.433 Area 16257
Q 663.00>618.90 (-) 5.96e3



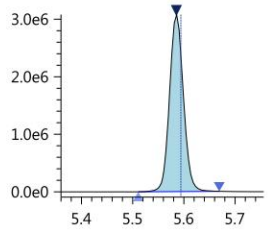
PFTeDA
Conc 0.0845
RT 5.584 Area 56217
Q 713.40>669.00 (-) 2.87e4



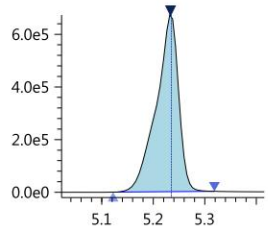
PFTeDA-13C
Conc 4.8845
RT 5.585 Area 5786225
Q 714.70>669.90 (-) 3.08e6



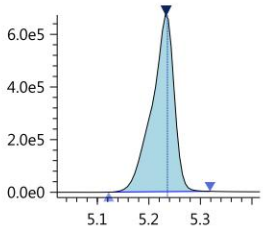
PFTeDA-13C_IS
Conc 5.0000
RT 5.585 Area 5786225
ISTD 714.70>669.90 (-) 3.08e6



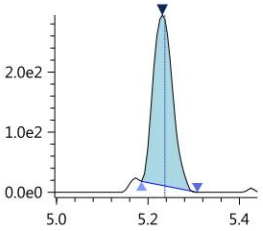
FOSA-13C_IS
Conc 5.0000
RT 5.234 Area 2016146
ISTD 506.00>78.05 (-) 6.73e5



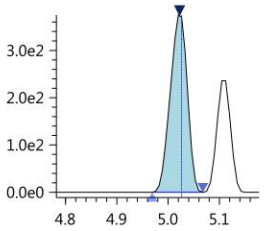
FOSA-13C
Conc 4.9063
RT 5.234 Area 2016146
Q 506.00>78.05 (-) 6.73e5



FOSA
Conc 0.0016
RT 5.231 Area 854
Q 498.20>78.00 (-) 2.95e2



N-MeFOSAA
Conc 0.0048
RT 5.022 Area 871
Q 570.20>419.00 (-) 3.75e2



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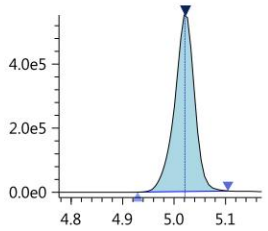
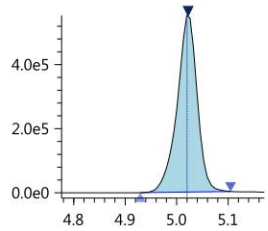
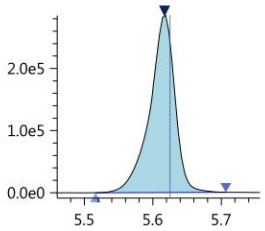
Conc 4.9956
RT 5.022 Area 1498060
Q 572.80>419.05 (-) 5.53e5



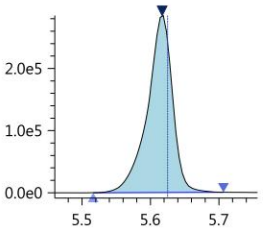
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.022 Area 1498060
ISTD 572.80>419.05 (-) 5.53e5



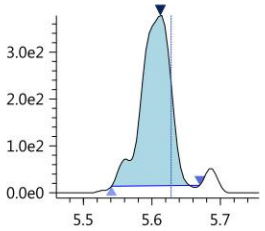
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 724251
ISTD 514.90>168.90 (-) 2.85e5



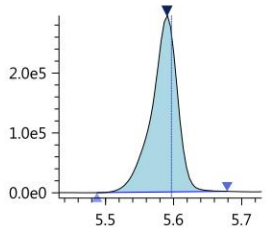
N-MeFOSA-d3
Conc 4.8499
RT 5.617 Area 724251
Q 514.90>168.90 (-) 2.85e5



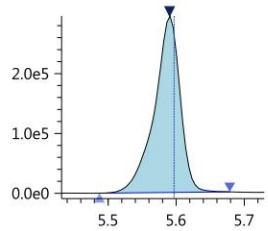
N-MeFOSA
Conc 0.0064
RT 5.612 Area 1092
Q 512.00>169.10 (-) 3.78e2



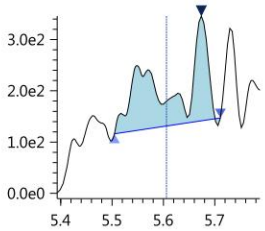
N-MeFOSE-d7
Conc 4.8862
RT 5.590 Area 771614
Q 622.70>59.10 (-) 2.96e5



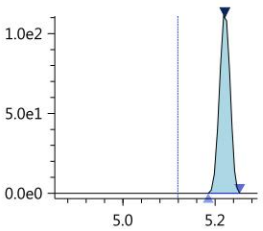
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.590 Area 771614
ISTD 622.70>59.10 (-) 2.96e5



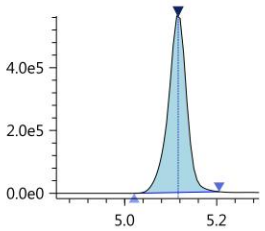
N-MeFOSE
Conc 0.0046
RT 5.674 Area 912
Q 616.00>59.00 (-) 3.46e2



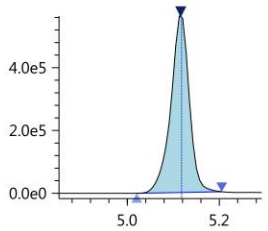
N-EtFOSAA
Conc 0.0010
RT 5.221 Area 187
Q 584.20>418.95 (-) 1.11e2



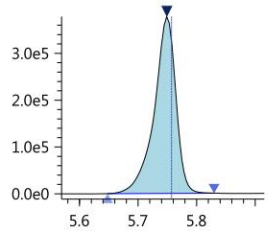
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.116 Area 1575216
ISTD 588.80>419.00 (-) 5.64e5



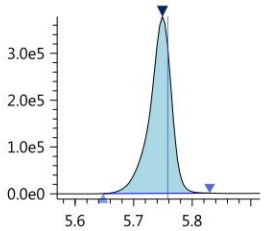
N-EtFOSAA-d5
Conc 5.2655
RT 5.116 Area 1575216
Q 588.80>419.00 (-) 5.64e5



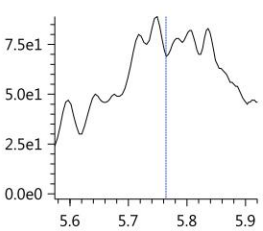
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.749 Area 968329
ISTD 530.90>169.15 (-) 3.79e5



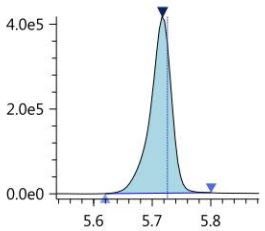
N-EtFOSA-d9
Conc 4.6831
RT 5.749 Area 968329
Q 530.90>169.15 (-) 3.79e5



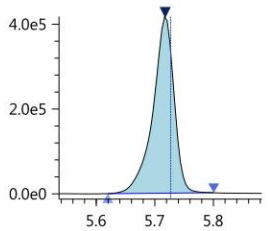
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 8.90e1



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.718 Area 1044942
ISTD 638.70>59.10 (-) 4.18e5



N-EtFOSE-d9
Conc 4.7940
RT 5.718 Area 1044942
Q 638.70>59.10 (-) 4.18e5

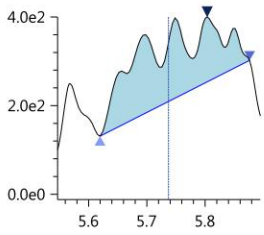


N-EtFOSE

Conc 0.0081

RT 5.803 Area 1593

Q 630.00>58.90 (-) 4.00e2

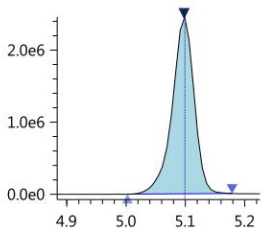


13C7-PFUnDA_IS

Conc 5.0000

RT 5.098 Area 6322236

ISTD 570.00>525.00 (-) 2.46e6

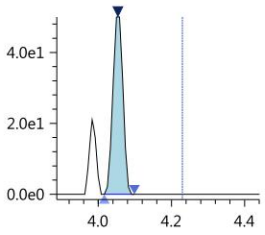


PFPeS

Conc 0.0009

RT 4.054 Area 98

Q 349.00>99.00 (-) 5.00e1

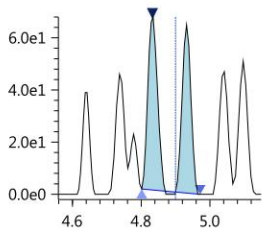


PFNS

Conc 0.0025

RT 4.833 Area 244

Q 549.00>99.00 (-) 6.80e1



190301_008

Sample ID: 0.05 PPB ICAL
Date acquired: 3/1/2019 4:37:49 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_008.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

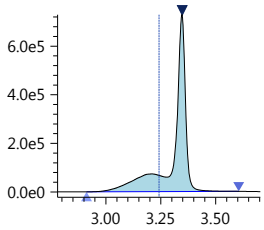
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.348	2635254	2635254	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.348	2635254	6267606	26	4.7215	ng/mL	5.0000
PFBA	Auto	3.347	27862	2635254	2	0.0558	ng/mL	0.0500
PFPeA-13C_IS	Auto	3.944	1719522	1719522	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.944	1719522	6267606	26	4.7526	ng/mL	5.0000
PFPeA	Auto	3.945	139361	1719522	4	0.0501	ng/mL	0.0500
PFBS_1	M	3.997	7996	805325	16	0.0463	ng/mL	0.0444
PFBS-13C	Auto	3.999	805325	6267606	26	4.9257	ng/mL	5.0000
PFBS-13C_IS	Auto	3.999	805325	805325	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.212	5502779	5502779	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.212	5502779	6267606	26	4.9320	ng/mL	5.0000
PFHxA	M	4.209	79502	5502779	6	0.0459	ng/mL	0.0500
HPFO_DA	Auto	4.274	11811	1169590	3	0.0471	ng/mL	0.0500
HFPO_DA-13C_IS	Auto	4.274	1169590	1169590	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.274	1169590	6267606	26	4.8276	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.185	669126	669126	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.185	669126	6267606	26	4.5935	ng/mL	5.0000
4_2-FTS_1	M	4.185	8437	669126	5	0.0545	ng/mL	0.0469
PFHpA	Auto	4.394	84551	5474907	8	0.0583	ng/mL	0.0500
PFHpA-13C_IS	Auto	4.399	5474907	5474907	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.399	5474907	6267606	26	4.7711	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.398	505353	505353	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.398	505353	6267606	26	4.4936	ng/mL	5.0000
PFHxS_1	M	4.400	5453	505353	7	0.0496	ng/mL	0.0457
6_2-FTS-13C	Auto	4.554	662721	6267606	26	5.1427	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.554	662721	662721	10	5.0000	ng/mL	5.0000
6_2-FTS_1	M	4.554	6698	780898	15	0.0473	ng/mL	0.0476
PFHpS_1	Auto	4.555	5913	505353	7	0.0476	ng/mL	0.0477
PFOA-13C_IS	Auto	4.563	5733853	5733853	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.563	5733853	6267606	26	5.0130	ng/mL	5.0000
PFOA	M	4.561	70337	5733853	9	0.0491	ng/mL	0.0500
PFOS_1	M	4.717	3658	705402	13	0.0381	ng/mL	0.0465
PFOS-13C_IS	Auto	4.716	705402	705402	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.716	705402	6267606	26	5.2868	ng/mL	5.0000
PFNA-13C_IS	Auto	4.731	6476691	6476691	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.731	6476691	6267606	26	5.0486	ng/mL	5.0000
PFNA	Auto	4.730	57957	6476691	11	0.0488	ng/mL	0.0500
PFDA-13C_IS	Auto	4.912	6007344	6007344	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.912	6007344	6267606	26	4.9640	ng/mL	5.0000
PFDA	Auto	4.911	62001	6007344	12	0.0632	ng/mL	0.0500
8_2-FTS-13C_IS	Auto	4.911	780898	780898	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.911	780898	6267606	26	5.1938	ng/mL	5.0000
8_2-FTS_1	M	4.911	7280	780898	15	0.0487	ng/mL	0.0480
PFDS_1	M	5.069	3448	705402	13	0.0295	ng/mL	0.0482
PFUnA	Auto	5.091	72833	5366724	14	0.0477	ng/mL	0.0500
PFUnA-13C_IS	Auto	5.093	5366724	5366724	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.093	5366724	6267606	26	4.9286	ng/mL	5.0000
PFDoA	Auto	5.268	53857	7729675	17	0.0480	ng/mL	0.0500
PFDoA-13C	Auto	5.269	7729675	6267606	26	4.8734	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.269	7729675	7729675	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.276	9118	780898	15	0.0508	ng/mL	0.0483
PFTrDA	M	5.436	63785	5496748	22	0.0509	ng/mL	0.0500
PFTeDA	Auto	5.584	71822	5496748	22	0.0497	ng/mL	0.0500
PFTeDA-13C	Auto	5.585	5496748	6267606	26	4.6806	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.585	5496748	5496748	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.230	1893473	1893473	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.230	1893473	6267606	26	4.6479	ng/mL	5.0000
FOSA	Auto	5.228	27199	1893473	18	0.0546	ng/mL	0.0500
N-MeFOSAA	M	5.017	9543	1420789	19	0.0545	ng/mL	0.0500
N-MeFOSAA-d3	Auto	5.015	1420789	6267606	26	4.7793	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.015	1420789	1420789	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.616	687779	687779	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.616	687779	6267606	26	4.6459	ng/mL	5.0000
N-MeFOSA	Auto	5.619	8919	687779	1	0.0547	ng/mL	0.0500
N-MeFOSE-d7	Auto	5.590	752820	6267606	26	4.8087	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.590	752820	752820	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.597	9698	752820	20	0.0499	ng/mL	0.0500

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.111	12473	1529086	21	0.0698	ng/mL	0.0500
N-EtFOSAA-d5_IS	Auto	5.111	1529086	1529086	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.111	1529086	6267606	26	5.1558	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.749	964690	964690	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.749	964690	6267606	26	4.7061	ng/mL	5.0000
N-EtFOSA	M	5.754	2783	964690	23	0.0866	ng/mL	0.0500
N-EtFOSE-d9_IS	Auto	5.718	1043480	1043480	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.718	1043480	6267606	26	4.8290	ng/mL	5.0000
N-EtFOSE	M	5.728	10508	1043480	24	0.0537	ng/mL	0.0500
13C7-PFUnDA_IS	Auto	5.092	6267606	6267606	26	5.0000	ng/mL	5.0000
PFPeS	M	4.226	4451	805325	16	0.0427	ng/mL	0.0470
PFNS	Auto	4.893	5152	705402	13	0.0522	ng/mL	0.0481

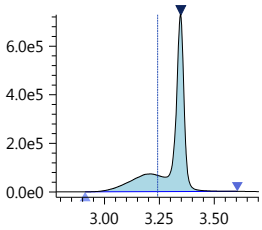
PFBA-13C_IS

Conc 5.0000
RT 3.348 Area 2635254
ISTD 216.90>172.15 (-) 7.30e5



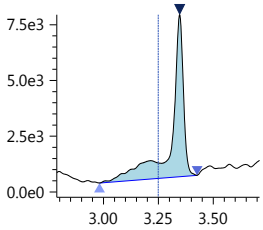
PFBA-13C

Conc 4.7215
RT 3.348 Area 2635254
Q 216.90>172.15 (-) 7.30e5



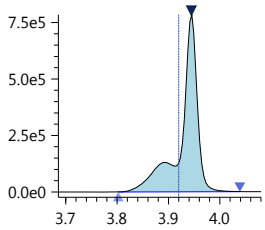
PFBA

Conc 0.0558
RT 3.347 Area 27862
Q 213.00>169.10 (-) 7.95e3



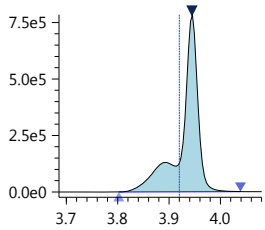
PFPeA-13C_IS

Conc 5.0000
RT 3.944 Area 1719522
ISTD 267.90>223.00 (-) 7.85e5



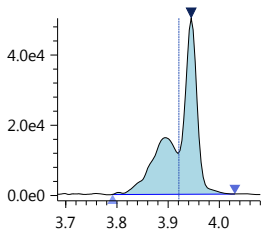
PFPeA-13C

Conc 4.7526
RT 3.944 Area 1719522
Q 267.90>223.00 (-) 7.85e5



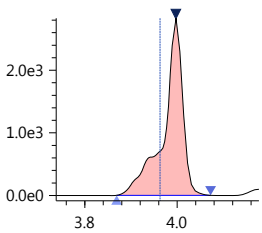
PFPeA

Conc 0.0501
RT 3.945 Area 139361
Q 263.05>219.10 (-) 5.05e4



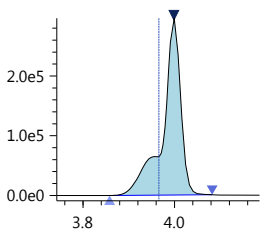
PFBS_1

Conc 0.0463
RT 3.997 Area 7996
Q 299.00>80.00 (-) 2.83e3



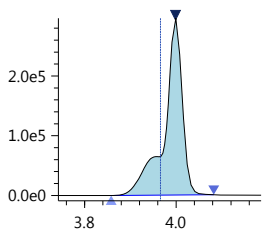
PFBS-13C

Conc 4.9257
RT 3.999 Area 805325
Q 301.80>80.00 (-) 2.97e5



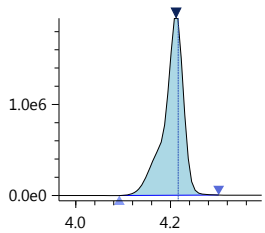
PFBS-13C_IS

Conc 5.0000
RT 3.999 Area 805325
ISTD 301.80>80.00 (-) 2.97e5



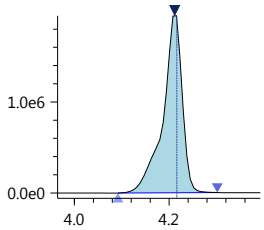
PFHxA-13C_IS

Conc 5.0000
RT 4.212 Area 5502779
ISTD 314.90>270.10 (-) 1.95e6



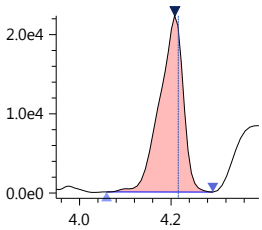
PFHxA-13C

Conc 4.9320
RT 4.212 Area 5502779
Q 314.90>270.10 (-) 1.95e6



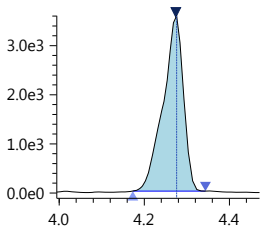
PFHxA

Conc 0.0459
RT 4.209 Area 79502
Q 313.00>269.00 (-) 2.24e4



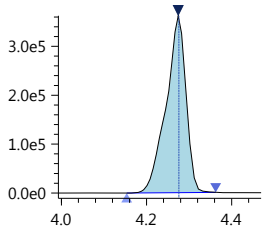
HPFO_DA

Conc 0.0471
RT 4.274 Area 11811
Q 329.00>169.00 (-) 3.61e3



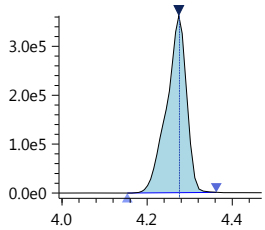
HFPO_DA-13C_IS

Conc 5.0000
RT 4.274 Area 1169590
ISTD 332.00>286.80 (-) 3.63e5

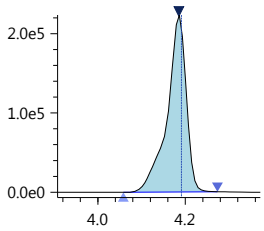


HFPO_DA-13C

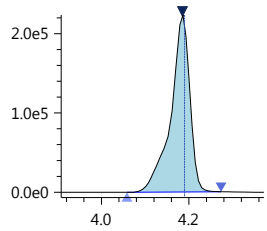
Conc 4.8276
RT 4.274 Area 1169590
Q 332.00>286.80 (-) 3.63e5



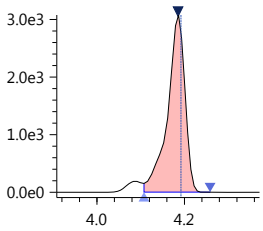
4_2-FTS-13C_IS
Conc 5.0000
RT 4.185 Area 669126
ISTD 328.80>309.05 (-) 2.24e5



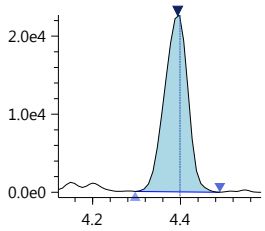
4_2-FTS-13C
Conc 4.5935
RT 4.185 Area 669126
Q 328.80>309.05 (-) 2.24e5



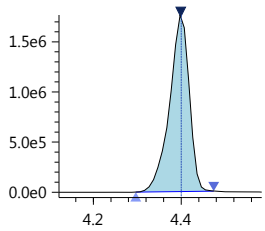
4_2-FTS_1
Conc 0.0545
RT 4.185 Area 8437
Q 327.00>307.05 (-) 3.08e3



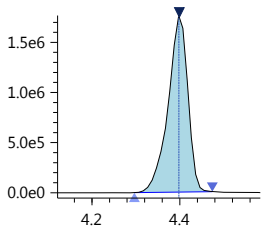
PFHpA
Conc 0.0583
RT 4.394 Area 84551
Q 362.90>319.00 (-) 2.27e4



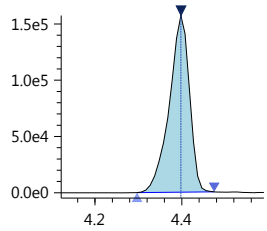
PFHpA-13C_IS
Conc 5.0000
RT 4.399 Area 5474907
ISTD 366.90>322.10 (-) 1.77e6



PFHpA-13C
Conc 4.7711
RT 4.399 Area 5474907
Q 366.90>322.10 (-) 1.77e6



PFHxS-18O_IS
Conc 5.0000
RT 4.398 Area 505353
ISTD 402.70>84.05 (-) 1.57e5



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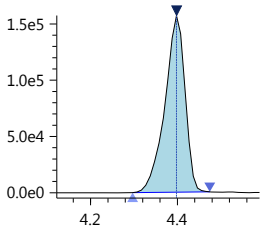
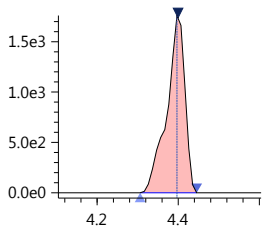
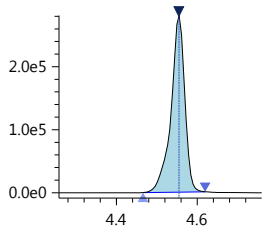
Conc 4.4936
RT 4.398 Area 505353
Q 402.70>84.05 (-) 1.57e5



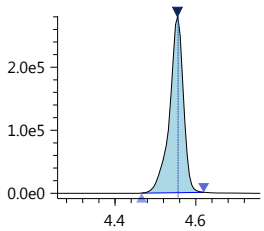
PFHxS_1
Conc 0.0496
RT 4.400 Area 5453
Q 399.00>80.00 (-) 1.76e3



6_2-FTS-13C
Conc 5.1427
RT 4.554 Area 662721
Q 428.90>409.00 (-) 2.81e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.554 Area 662721
ISTD 428.90>409.00 (-) 2.81e5



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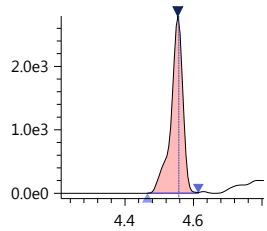
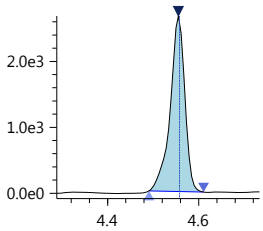
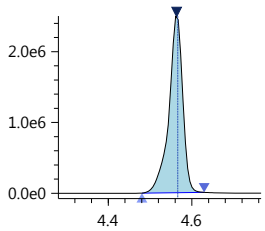
Conc 0.0473
RT 4.554 Area 6698
Q 427.00>407.00 (-) 2.79e3



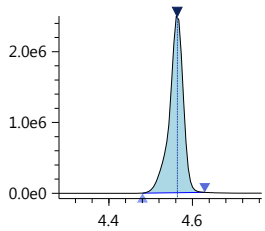
PFHpS_1
Conc 0.0476
RT 4.555 Area 5913
Q 449.00>80.15 (-) 2.69e3



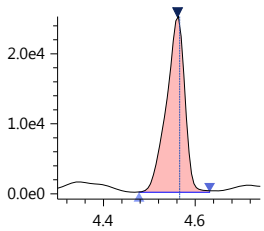
PFOA-13C_IS
Conc 5.0000
RT 4.563 Area 5733853
ISTD 416.80>372.05 (-) 2.50e6



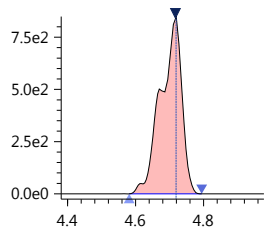
PFOA-13C
Conc 5.0130
RT 4.563 Area 5733853
Q 416.80>372.05 (-) 2.50e6



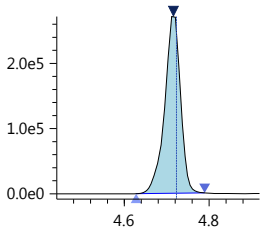
PFOA
Conc 0.0491
RT 4.561 Area 70337
Q 413.00>369.00 (-) 2.53e4



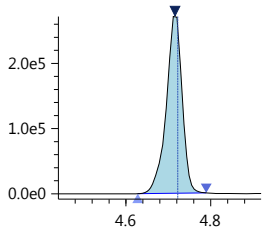
PFOS_1
Conc 0.0381
RT 4.717 Area 3658
Q 499.00>80.00 (-) 8.49e2



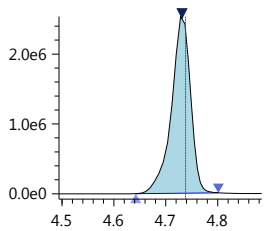
PFOS-13C_IS
Conc 5.0000
RT 4.716 Area 705402
ISTD 502.80>80.05 (-) 2.72e5



PFOS-13C
Conc 5.2868
RT 4.716 Area 705402
Q 502.80>80.05 (-) 2.72e5



PFNA-13C_IS
Conc 5.0000
RT 4.731 Area 6476691
ISTD 467.80>423.00 (-) 2.54e6

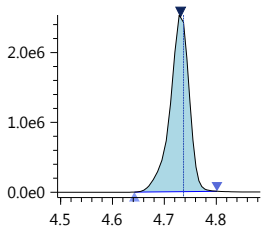


PFNA-13C

Conc 5.0486

RT 4.731 Area 6476691

Q 467.80>423.00 (-) 2.54e6

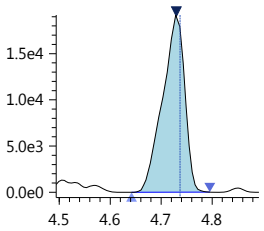


PFNA

Conc 0.0488

RT 4.730 Area 57957

Q 463.00>418.90 (-) 1.92e4

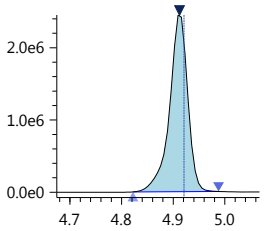


PFDA-13C_IS

Conc 5.0000

RT 4.912 Area 6007344

ISTD 514.80>469.95 (-) 2.45e6

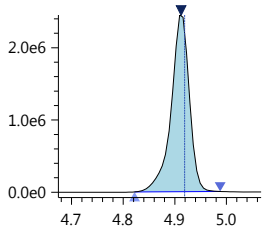


PFDA-13C

Conc 4.9640

RT 4.912 Area 6007344

Q 514.80>469.95 (-) 2.45e6

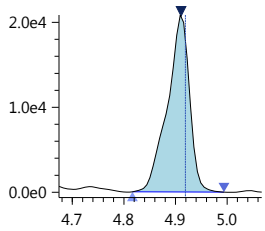


PFDA

Conc 0.0632

RT 4.911 Area 62001

Q 513.00>468.80 (-) 2.09e4

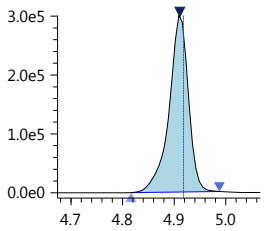


8_2-FTS-13C_IS

Conc 5.0000

RT 4.911 Area 780898

ISTD 528.80>509.00 (-) 3.01e5

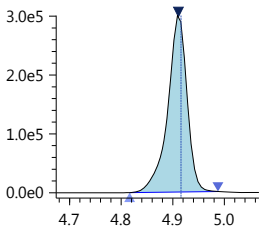


8_2-FTS-13C

Conc 5.1938

RT 4.911 Area 780898

Q 528.80>509.00 (-) 3.01e5

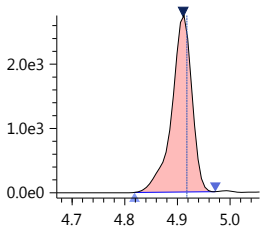


8_2-FTS_1

Conc 0.0487

RT 4.911 Area 7280

Q 527.10>506.90 (-) 2.76e3

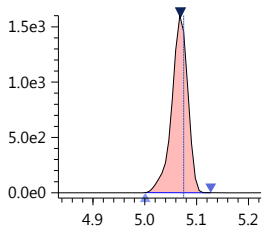


PFDS_1

Conc 0.0295

RT 5.069 Area 3448

Q 599.00>79.90 (-) 1.60e3

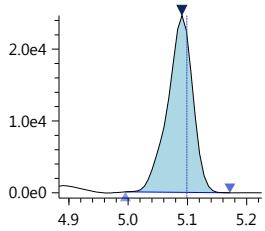


PFUnA

Conc 0.0477

RT 5.091 Area 72833

Q 563.00>518.90 (-) 2.47e4

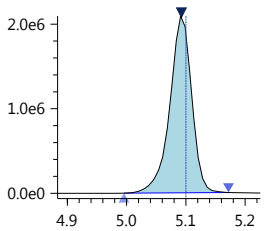


PFUnA-13C_IS

Conc 5.0000

RT 5.093 Area 5366724

ISTD 564.80>519.95 (-) 2.10e6



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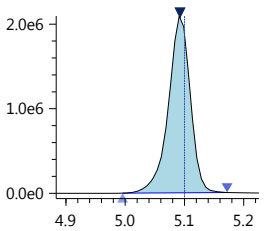
Conc 4.9286

RT 5.093 Area 5366724

Q 564.80>519.95 (-) 2.10e6

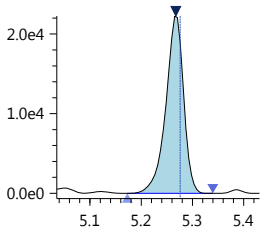


PFDoA

Conc 0.0480

RT 5.268 Area 53857

Q 613.05>569.00 (-) 2.23e4

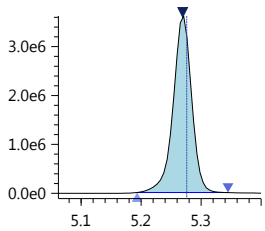


PFDoA-13C

Conc 4.8734

RT 5.269 Area 7729675

Q 614.80>569.95 (-) 3.63e6

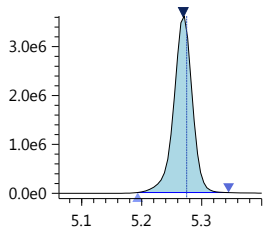


PFDoA-13C_IS

Conc 5.0000

RT 5.269 Area 7729675

ISTD 614.80>569.95 (-) 3.63e6

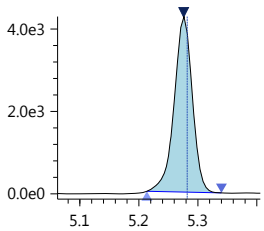


10_2-FtS_1

Conc 0.0508

RT 5.276 Area 9118

Q 627.00>606.95 (-) 4.30e3

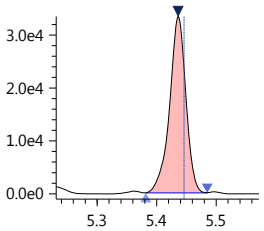


PFTrDA

Conc 0.0509

RT 5.436 Area 63785

Q 663.00>618.90 (-) 3.35e4

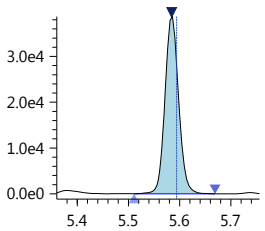


PFTeDA

Conc 0.0497

RT 5.584 Area 71822

Q 713.40>669.00 (-) 3.87e4

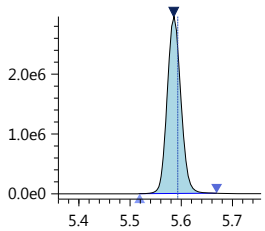


PFTeDA-13C

Conc 4.6806

RT 5.585 Area 5496748

Q 714.70>669.90 (-) 2.96e6

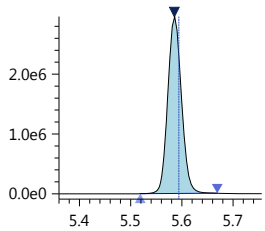


PFTeDA-13C_IS

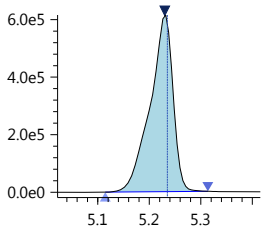
Conc 5.0000

RT 5.585 Area 5496748

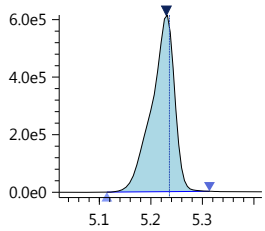
ISTD 714.70>669.90 (-) 2.96e6



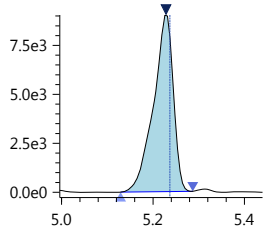
FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1893473
ISTD 506.00>78.05 (-) 6.16e5



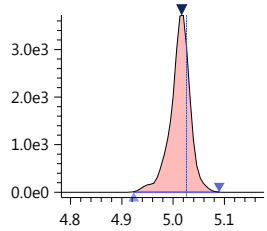
FOSA-13C
Conc 4.6479
RT 5.230 Area 1893473
Q 506.00>78.05 (-) 6.16e5



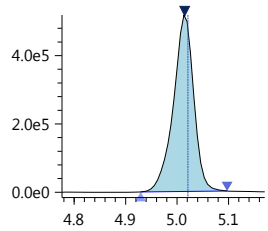
FOSA
Conc 0.0546
RT 5.228 Area 27199
Q 498.20>78.00 (-) 9.05e3



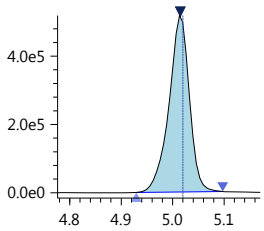
N-MeFOSAA
Conc 0.0545
RT 5.017 Area 9543
Q 570.20>419.00 (-) 3.73e3



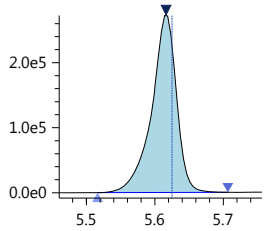
N-MeFOSAA-d3
Conc 4.7793
RT 5.015 Area 1420789
Q 572.80>419.05 (-) 5.19e5



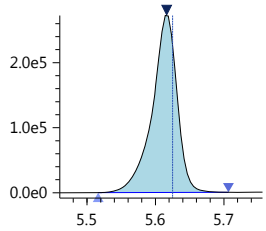
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.015 Area 1420789
ISTD 572.80>419.05 (-) 5.19e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.616 Area 687779
ISTD 514.90>168.90 (-) 2.72e5



N-MeFOSA-d3
Conc 4.6459
RT 5.616 Area 687779
Q 514.90>168.90 (-) 2.72e5



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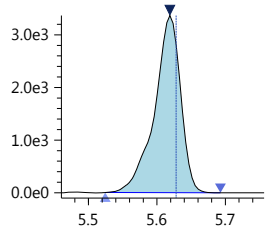
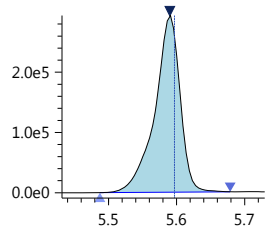
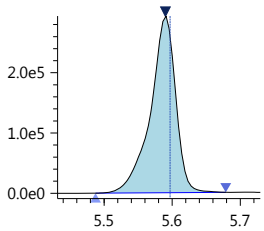
Conc 0.0547
RT 5.619 Area 8919
Q 512.00>169.10 (-) 3.37e3



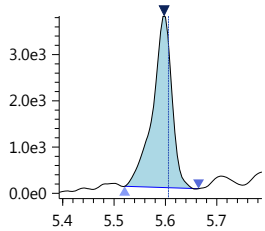
N-MeFOSE-d7
Conc 4.8087
RT 5.590 Area 752820
Q 622.70>59.10 (-) 2.94e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.590 Area 752820
ISTD 622.70>59.10 (-) 2.94e5



N-MeFOSE
Conc 0.0499
RT 5.597 Area 9698
Q 616.00>59.00 (-) 3.83e3



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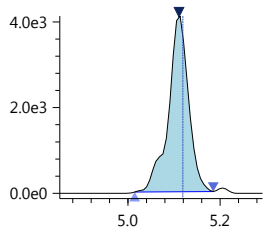
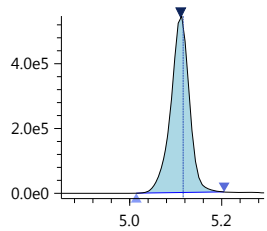
Conc 0.0698
RT 5.111 Area 12473
Q 584.20>418.95 (-) 4.14e3



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.111 Area 1529086
ISTD 588.80>419.00 (-) 5.47e5



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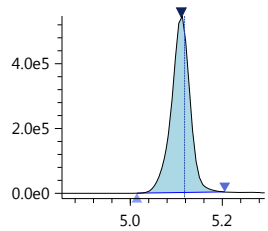
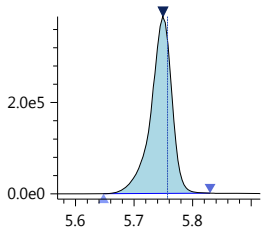
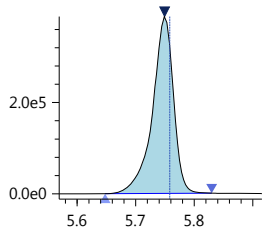
Conc 5.1558
RT 5.111 Area 1529086
Q 588.80>419.00 (-) 5.47e5



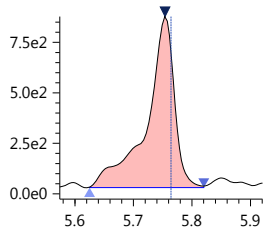
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.749 Area 964690
ISTD 530.90>169.15 (-) 3.88e5



N-EtFOSA-d9
Conc 4.7061
RT 5.749 Area 964690
Q 530.90>169.15 (-) 3.88e5



N-EtFOSA
Conc 0.0866
RT 5.754 Area 2783
Q 526.90>169.10 (-) 8.78e2



N-EtFOSE-d9_IS
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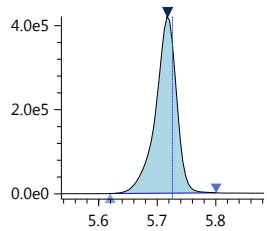
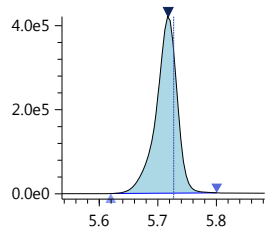
RT 5.718 Area 1043480
ISTD 638.70>59.10 (-) 4.22e5

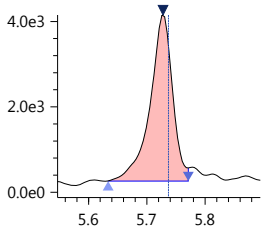


N-EtFOSE-d9
Conc 4.8290
RT 5.718 Area 1043480
Q 638.70>59.10 (-) 4.22e5



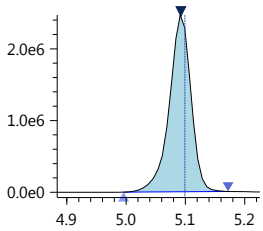
N-EtFOSE

Conc 0.0537
RT 5.728 Area 10508
Q 630.00>58.90 (-) 4.15e3



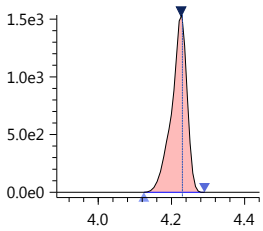
13C7-PFUnDA_IS

Conc 5.0000
RT 5.092 Area 6267606
ISTD 570.00>525.00 (-) 2.47e6



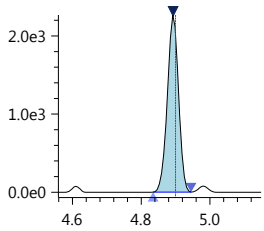
PFPeS

Conc 0.0427
RT 4.226 Area 4451
Q 349.00>99.00 (-) 1.54e3



PFNS

Conc 0.0522
RT 4.893 Area 5152
Q 549.00>99.00 (-) 2.27e3



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Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_008.lcd
Vial: 1 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
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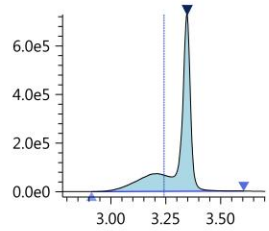
ISTD 216.90>172.15 (-) 7.30e5



PFBA-13C
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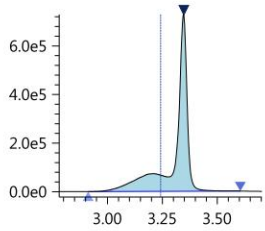
RT 3.348 Area 2635254
Q 216.90>172.15 (-) 7.30e5



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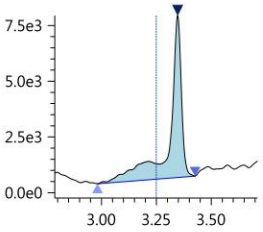
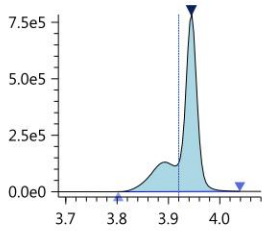
Q 213.00>169.10 (-) 7.95e3



PFPeA-13C_IS
Conc 5.0000
RT 3.944 Area 1719522
ISTD 267.90>223.00 (-) 7.85e5



PFPeA-13C
Conc 4.7526
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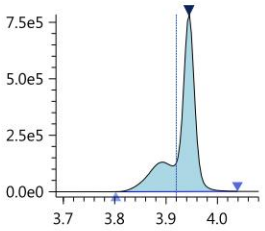
Q 267.90>223.00 (-) 7.85e5



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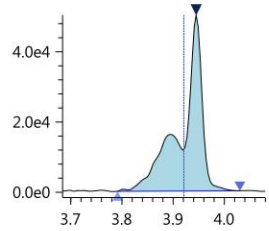
Q 263.05>219.10 (-) 5.05e4



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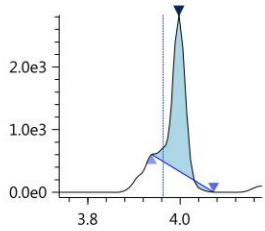
Q 299.00>80.00 (-) 2.83e3



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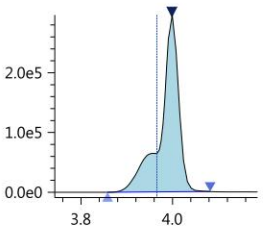
Q 301.80>80.00 (-) 2.97e5



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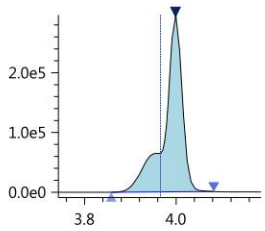

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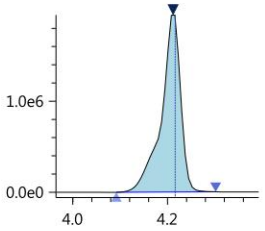
RT 4.212 Area 5502779
ISTD 314.90>270.10 (-) 1.95e6



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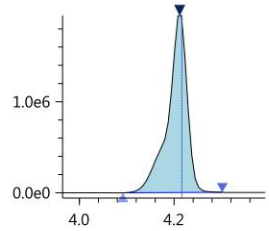
Conc 4.9320
RT 4.212 Area 5502779
Q 314.90>270.10 (-) 1.95e6



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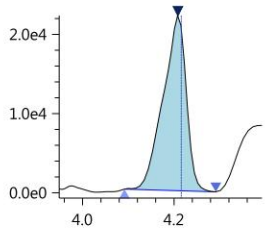
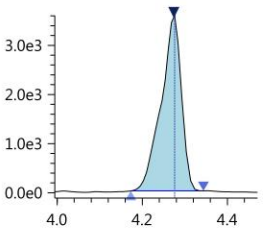
Conc 0.0679
RT 4.209 Area 77366
Q 313.00>269.00 (-) 2.24e4



HPFO_DA
Conc 0.0471
RT 4.274 Area 11811
Q 329.00>169.00 (-) 3.61e3



HFPO_DA-13C_IS
Conc 5.0000
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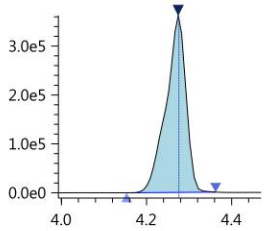
ISTD 332.00>286.80 (-) 3.63e5



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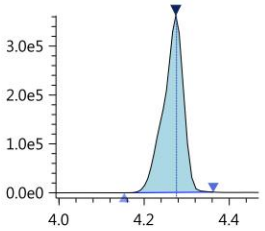
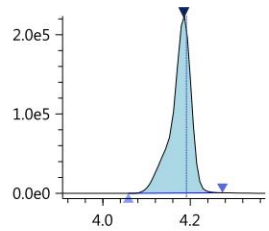
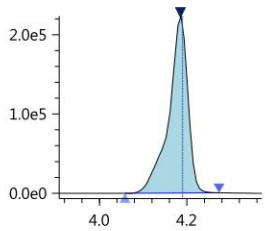
Conc 4.8276
RT 4.274 Area 1169590
Q 332.00>286.80 (-) 3.63e5



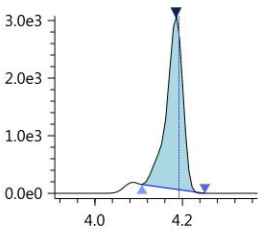
4_2-FTS-13C_IS
Conc 5.0000
RT 4.185 Area 669126
ISTD 328.80>309.05 (-) 2.24e5



4_2-FTS-13C
Conc 4.5935
RT 4.185 Area 669126
Q 328.80>309.05 (-) 2.24e5



4_2-FTS_1
Conc 0.0511
RT 4.185 Area 7814
Q 327.00>307.05 (-) 3.08e3



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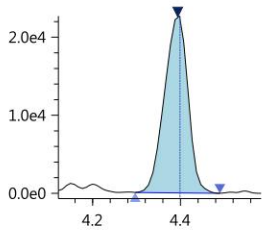
Q 362.90>319.00 (-) 2.27e4



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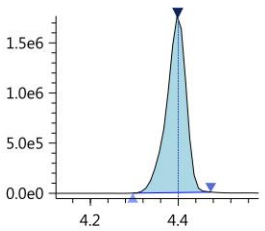

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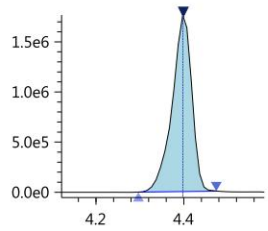
Q 366.90>322.10 (-) 1.77e6



PFHxS-18O_IS
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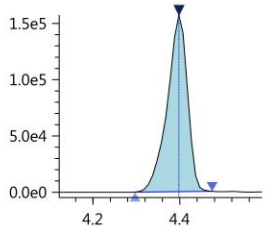
ISTD 402.70>84.05 (-) 1.57e5



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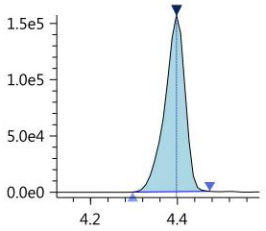
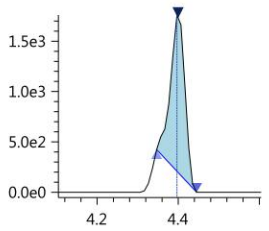
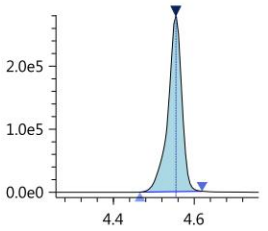
RT 4.398 Area 505353
Q 402.70>84.05 (-) 1.57e5



PFHxS_1
Conc 0.0368
RT 4.400 Area 3863
Q 399.00>80.00 (-) 1.76e3



6_2-FTS-13C
Conc 5.1427
RT 4.554 Area 662721
Q 428.90>409.00 (-) 2.81e5



6_2-FTS-13C_IS
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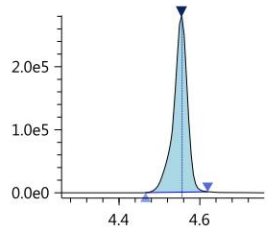
ISTD 428.90>409.00 (-) 2.81e5



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Conc 0.0404
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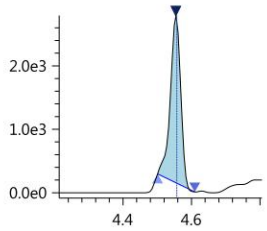
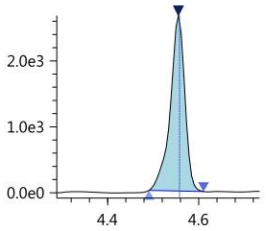
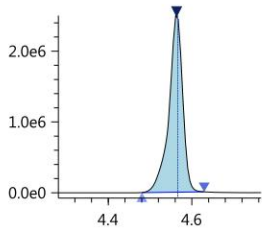
Q 427.00>407.00 (-) 2.79e3



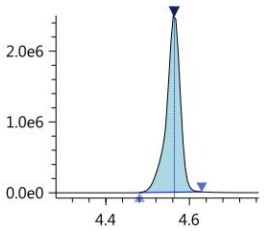
PFHpS_1
Conc 0.0476
RT 4.555 Area 5913
Q 449.00>80.15 (-) 2.69e3



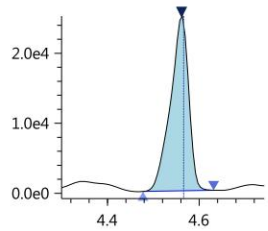
PFOA-13C_IS
Conc 5.0000
RT 4.563 Area 5733853
ISTD 416.80>372.05 (-) 2.50e6



PFOA-13C
Conc 5.0130
RT 4.563 Area 5733853
Q 416.80>372.05 (-) 2.50e6



PFOA
Conc 0.0655
RT 4.561 Area 69164
Q 413.00>369.00 (-) 2.53e4



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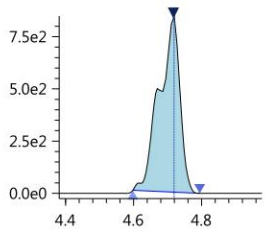
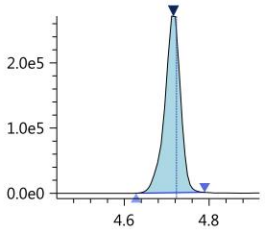
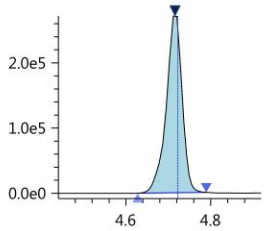
Conc 0.0375
RT 4.717 Area 3572
Q 499.00>80.00 (-) 8.49e2



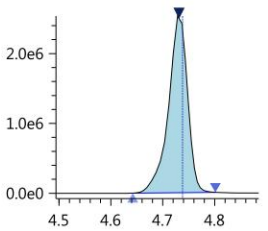
PFOS-13C_IS
Conc 5.0000
RT 4.716 Area 705402
ISTD 502.80>80.05 (-) 2.72e5



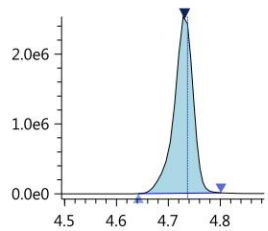
PFOS-13C
Conc 5.2868
RT 4.716 Area 705402
Q 502.80>80.05 (-) 2.72e5



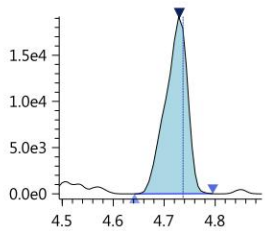
PFNA-13C_IS
Conc 5.0000
RT 4.731 Area 6476691
ISTD 467.80>423.00 (-) 2.54e6



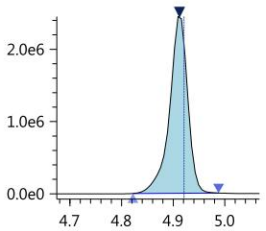
PFNA-13C
Conc 5.0486
RT 4.731 Area 6476691
Q 467.80>423.00 (-) 2.54e6



PFNA
Conc 0.0614
RT 4.730 Area 57957
Q 463.00>418.90 (-) 1.92e4



PFDA-13C_IS
Conc 5.0000
RT 4.912 Area 6007344
ISTD 514.80>469.95 (-) 2.45e6



PFDA-13C
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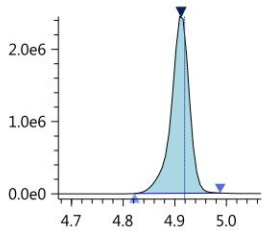
RT 4.912 Area 6007344
Q 514.80>469.95 (-) 2.45e6



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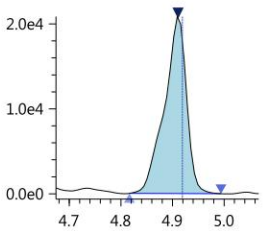
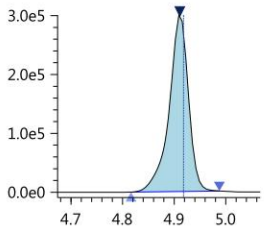
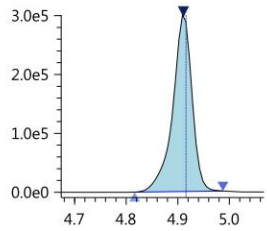
Conc 0.0632
RT 4.911 Area 62001
Q 513.00>468.80 (-) 2.09e4



8_2-FTS-13C_IS
Conc 5.0000
RT 4.911 Area 780898
ISTD 528.80>509.00 (-) 3.01e5



8_2-FTS-13C
Conc 5.1938
RT 4.911 Area 780898
Q 528.80>509.00 (-) 3.01e5



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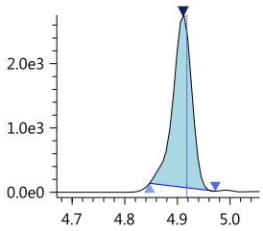
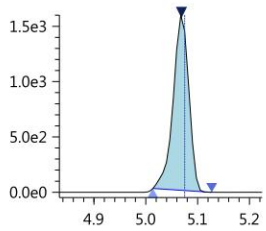
RT 4.911 Area 6715
Q 527.10>506.90 (-) 2.76e3



PFDS_1
Conc 0.0302
RT 5.069 Area 3326
Q 599.00>79.90 (-) 1.60e3



PFUnA
Conc 0.0729
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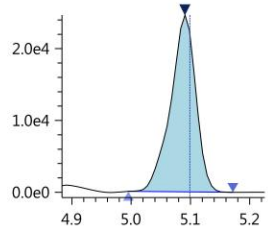
Q 563.00>518.90 (-) 2.47e4



PFUnA-13C_IS
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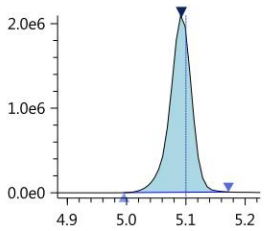
ISTD 564.80>519.95 (-) 2.10e6



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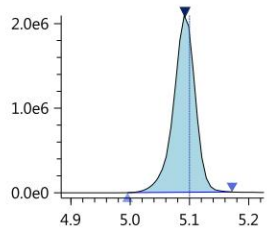
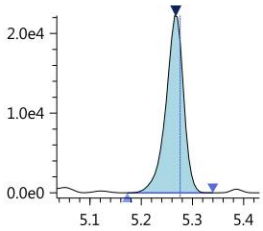
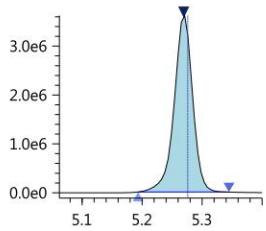
RT 5.093 Area 5366724
Q 564.80>519.95 (-) 2.10e6



PFDoA
Conc 0.0557
RT 5.268 Area 53857
Q 613.05>569.00 (-) 2.23e4



PFDoA-13C
Conc 4.8734
RT 5.269 Area 7729675
Q 614.80>569.95 (-) 3.63e6



PFDoA-13C_IS
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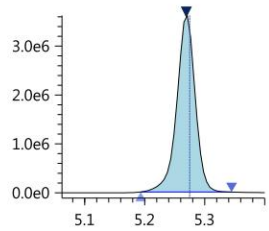
RT 5.269 Area 7729675
ISTD 614.80>569.95 (-) 3.63e6



10_2-FtS_1
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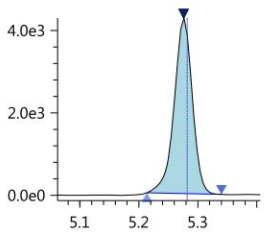
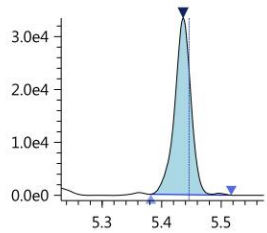
RT 5.276 Area 9118
Q 627.00>606.95 (-) 4.30e3



PFTrDA
Conc 0.0615
RT 5.436 Area 64432
Q 663.00>618.90 (-) 3.35e4



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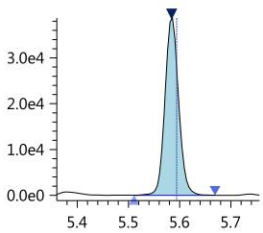
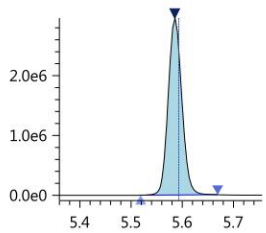
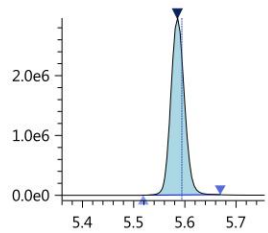
Conc 0.1136
RT 5.584 Area 71822
Q 713.40>669.00 (-) 3.87e4



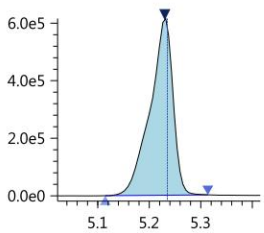
PFTeDA-13C
Conc 4.6806
RT 5.585 Area 5496748
Q 714.70>669.90 (-) 2.96e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.585 Area 5496748
ISTD 714.70>669.90 (-) 2.96e6



FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1893473
ISTD 506.00>78.05 (-) 6.16e5



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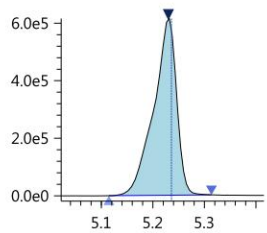
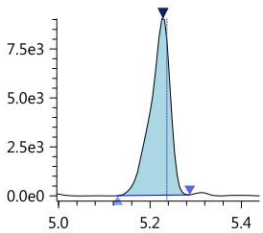
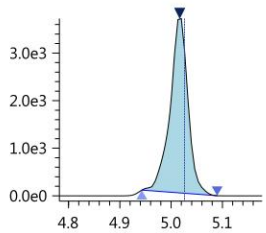
Conc 4.6479
RT 5.230 Area 1893473
Q 506.00>78.05 (-) 6.16e5



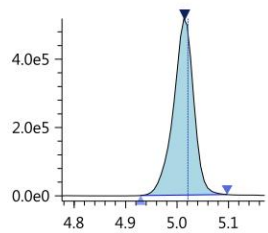
FOSA
Conc 0.0546
RT 5.228 Area 27199
Q 498.20>78.00 (-) 9.05e3



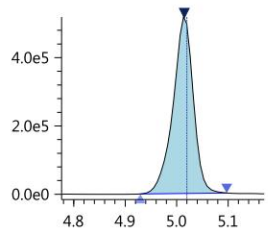
N-MeFOSAA
Conc 0.0517
RT 5.017 Area 8976
Q 570.20>419.00 (-) 3.73e3



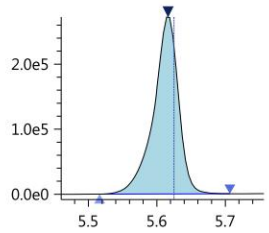
N-MeFOSAA-d3
Conc 4.7793
RT 5.015 Area 1420789
Q 572.80>419.05 (-) 5.19e5



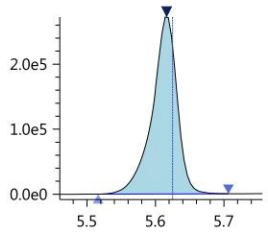
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.015 Area 1420789
ISTD 572.80>419.05 (-) 5.19e5



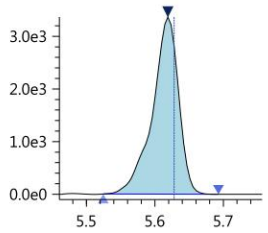
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.616 Area 687779
ISTD 514.90>168.90 (-) 2.72e5



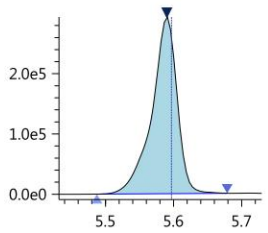
N-MeFOSA-d3
Conc 4.6459
RT 5.616 Area 687779
Q 514.90>168.90 (-) 2.72e5



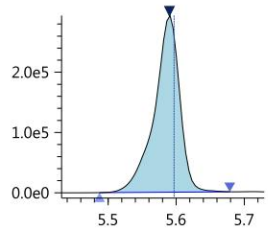
N-MeFOSA
Conc 0.0547
RT 5.619 Area 8919
Q 512.00>169.10 (-) 3.37e3



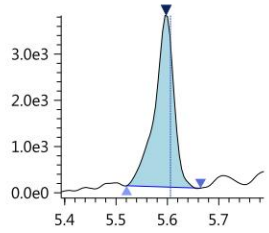
N-MeFOSE-d7
Conc 4.8087
RT 5.590 Area 752820
Q 622.70>59.10 (-) 2.94e5



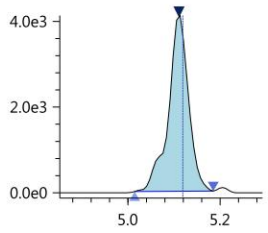
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.590 Area 752820
ISTD 622.70>59.10 (-) 2.94e5



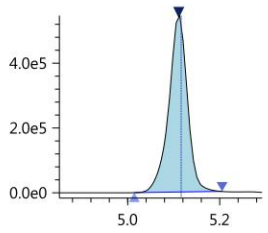
N-MeFOSE
Conc 0.0499
RT 5.597 Area 9698
Q 616.00>59.00 (-) 3.83e3



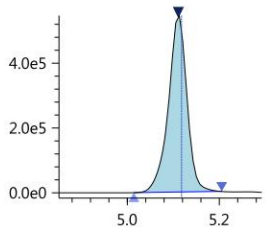
N-EtFOSAA
Conc 0.0687
RT 5.111 Area 12473
Q 584.20>418.95 (-) 4.14e3



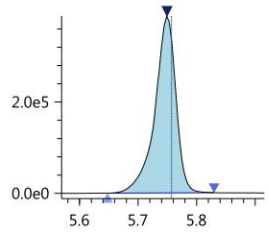
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.111 Area 1529086
ISTD 588.80>419.00 (-) 5.47e5



N-EtFOSAA-d5
Conc 5.1558
RT 5.111 Area 1529086
Q 588.80>419.00 (-) 5.47e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.749 Area 964690
ISTD 530.90>169.15 (-) 3.88e5



N-EtFOSA-d9
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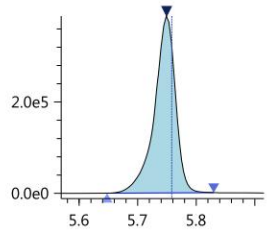
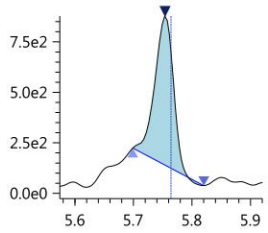
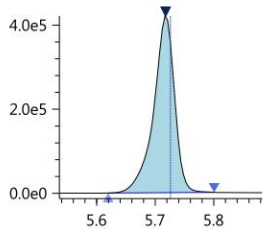
RT 5.749 Area 964690
Q 530.90>169.15 (-) 3.88e5



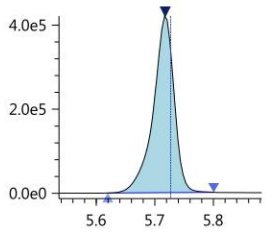
N-EtFOSA
Conc 0.0510
RT 5.754 Area 1620
Q 526.90>169.10 (-) 8.78e2



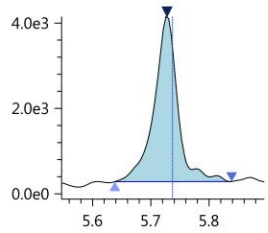
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.718 Area 1043480
ISTD 638.70>59.10 (-) 4.22e5



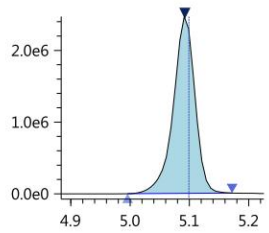
N-EtFOSE-d9
Conc 4.8290
RT 5.718 Area 1043480
Q 638.70>59.10 (-) 4.22e5



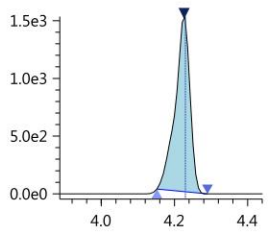
N-EtFOSE
Conc 0.0554
RT 5.728 Area 10898
Q 630.00>58.90 (-) 4.15e3



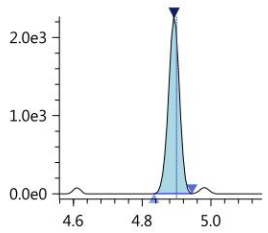
13C7-PFUnDA_IS
Conc 5.0000
RT 5.092 Area 6267606
ISTD 570.00>525.00 (-) 2.47e6



PFPeS
Conc 0.0412
RT 4.226 Area 4262
Q 349.00>99.00 (-) 1.54e3



PFNS
Conc 0.0527
RT 4.893 Area 5152
Q 549.00>99.00 (-) 2.27e3



190301_009

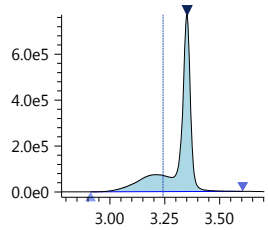
Sample ID: 0.10 PPB ICAL
Date acquired: 3/1/2019 4:48:15 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_009.lcd
Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.352	2746843	2746843	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.352	2746843	6286936	26	4.9063	ng/mL	5.0000
PFBA	Auto	3.351	53978	2746843	2	0.1038	ng/mL	0.1000
PFPeA-13C_IS	Auto	3.950	1757353	1757353	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.950	1757353	6286936	26	4.8422	ng/mL	5.0000
PFPeA	Auto	3.951	180591	1757353	4	0.0975	ng/mL	0.1000
PFBS_1	Auto	4.001	13733	767752	16	0.0834	ng/mL	0.0887
PFBS-13C	Auto	4.003	767752	6286936	26	4.6815	ng/mL	5.0000
PFBS-13C_IS	Auto	4.003	767752	767752	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.217	5302235	5302235	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.217	5302235	6286936	26	4.7376	ng/mL	5.0000
PFHxA	Auto	4.215	142496	5302235	6	0.1155	ng/mL	0.1000
HPFO_DA	Auto	4.279	26526	1217839	3	0.1015	ng/mL	0.1000
HFPO_DA-13C_IS	Auto	4.278	1217839	1217839	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.278	1217839	6286936	26	5.0113	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.190	725616	725616	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.190	725616	6286936	26	4.9659	ng/mL	5.0000
4_2-FTS_1	Auto	4.189	18510	725616	5	0.1103	ng/mL	0.0937
PFHpA	M	4.397	109088	6186615	8	0.0723	ng/mL	0.1000
PFHpA-13C_IS	Auto	4.400	6186615	6186615	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.400	6186615	6286936	26	5.3747	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.400	550874	550874	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.400	550874	6286936	26	4.8833	ng/mL	5.0000
PFHxS_1	Auto	4.396	10349	550874	7	0.0863	ng/mL	0.0913
6_2-FTS-13C	Auto	4.556	666702	6286936	26	5.1576	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.556	666702	666702	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.555	13976	795020	15	0.0969	ng/mL	0.0951
PFHpS_1	Auto	4.556	12905	550874	7	0.0953	ng/mL	0.0953
PFOA-13C_IS	Auto	4.564	6024297	6024297	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.564	6024297	6286936	26	5.2507	ng/mL	5.0000
PFOA	Auto	4.563	126957	6024297	9	0.1026	ng/mL	0.1000
PFOS_1	M	4.719	8479	639816	13	0.0973	ng/mL	0.0929
PFOS-13C_IS	Auto	4.719	639816	639816	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.719	639816	6286936	26	4.7805	ng/mL	5.0000
PFNA-13C_IS	Auto	4.735	6466189	6466189	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.735	6466189	6286936	26	5.0249	ng/mL	5.0000
PFNA	M	4.735	104657	6466189	11	0.1019	ng/mL	0.1000
PFDA-13C_IS	Auto	4.918	6044898	6044898	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.918	6044898	6286936	26	4.9796	ng/mL	5.0000
PFDA	Auto	4.917	110988	6044898	12	0.1125	ng/mL	0.1000
8_2-FTS-13C_IS	Auto	4.916	795020	795020	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.916	795020	6286936	26	5.2714	ng/mL	5.0000
8_2-FTS_1	Auto	4.916	15669	795020	15	0.1030	ng/mL	0.0960
PFDS_1	Auto	5.075	8956	639816	13	0.0845	ng/mL	0.0965
PFUnA	Auto	5.098	125856	5433308	14	0.1099	ng/mL	0.1000
PFUnA-13C_IS	Auto	5.099	5433308	5433308	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.099	5433308	6286936	26	4.9744	ng/mL	5.0000
PFDoA	M	5.274	108705	7778946	17	0.1066	ng/mL	0.1000
PFDoA-13C	Auto	5.276	7778946	6286936	26	4.8894	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.276	7778946	7778946	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.283	18315	795020	15	0.1002	ng/mL	0.0966
PFTrDA	Auto	5.445	124161	6041068	22	0.1011	ng/mL	0.1000
PFTeDA	Auto	5.593	100133	6041068	22	0.1005	ng/mL	0.1000
PFTeDA-13C	Auto	5.592	6041068	6286936	26	5.1283	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.592	6041068	6041068	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.237	2025489	2025489	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.237	2025489	6286936	26	4.9567	ng/mL	5.0000
FOSA	Auto	5.237	51337	2025489	18	0.0964	ng/mL	0.1000
N-MeFOSAA	Auto	5.020	15409	1530234	19	0.0817	ng/mL	0.1000
N-MeFOSAA-d3	Auto	5.020	1530234	6286936	26	5.1316	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.020	1530234	1530234	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.623	743352	743352	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.623	743352	6286936	26	5.0058	ng/mL	5.0000
N-MeFOSA	Auto	5.623	18419	743352	1	0.1046	ng/mL	0.1000
N-MeFOSE-d7	Auto	5.596	795519	6286936	26	5.0658	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.596	795519	795519	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.606	20197	795519	20	0.0983	ng/mL	0.1000

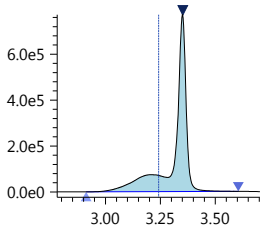
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.118	15917	1570873	21	0.0867	ng/mL	0.1000
N-EtFOSAA-d5_IS	Auto	5.117	1570873	1570873	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.117	1570873	6286936	26	5.2804	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.756	1011501	1011501	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.756	1011501	6286936	26	4.9193	ng/mL	5.0000
N-EtFOSA	M	5.761	3532	1011501	23	0.1048	ng/mL	0.1000
N-EtFOSE-d9_IS	Auto	5.724	1061324	1061324	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.724	1061324	6286936	26	4.8965	ng/mL	5.0000
N-EtFOSE	Auto	5.734	20198	1061324	24	0.1016	ng/mL	0.1000
13C7-PFUnDA_IS	Auto	5.098	6286936	6286936	26	5.0000	ng/mL	5.0000
PFPeS	M	4.227	10759	767752	16	0.1082	ng/mL	0.0941
PFNS	M	4.899	9404	639816	13	0.1050	ng/mL	0.0962

PFBA-13C_IS
Conc 5.0000
RT 3.352 Area 2746843
ISTD 216.90>172.15 (-) 7.72e5



PFBA-13C
Conc 4.9063
RT 3.352 Area 2746843
Q 216.90>172.15 (-) 7.72e5



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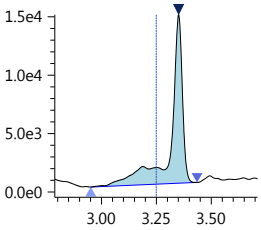
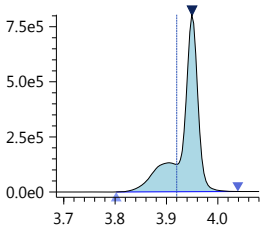
Conc 0.1038
RT 3.351 Area 53978
Q 213.00>169.10 (-) 1.52e4



PFPeA-13C_IS
Conc 5.0000
RT 3.950 Area 1757353
ISTD 267.90>223.00 (-) 8.05e5



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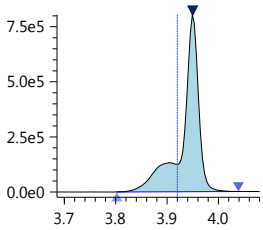
Conc 4.8422
RT 3.950 Area 1757353
Q 267.90>223.00 (-) 8.05e5



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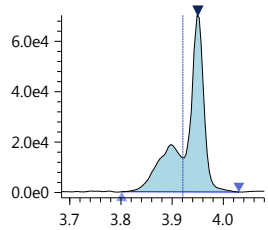
Conc 0.0975
RT 3.951 Area 180591
Q 263.05>219.10 (-) 7.04e4



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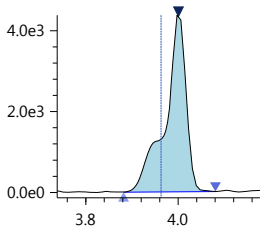
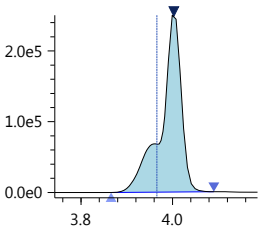
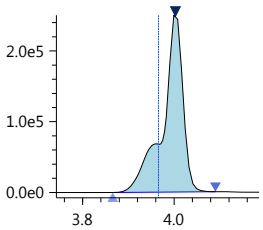
Conc 0.0834
RT 4.001 Area 13733
Q 299.00>80.00 (-) 4.38e3



PFBS-13C
Conc 4.6815
RT 4.003 Area 767752
Q 301.80>80.00 (-) 2.50e5



PFBS-13C_IS
Conc 5.0000
RT 4.003 Area 767752
ISTD 301.80>80.00 (-) 2.50e5



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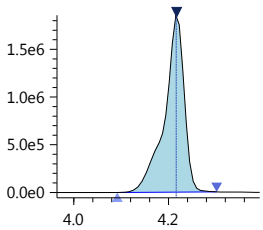
Conc 5.0000
RT 4.217 Area 5302235
ISTD 314.90>270.10 (-) 1.86e6



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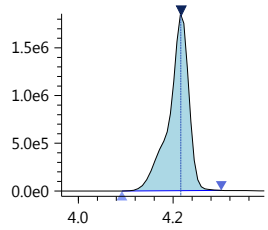
Conc 4.7376
RT 4.217 Area 5302235
Q 314.90>270.10 (-) 1.86e6



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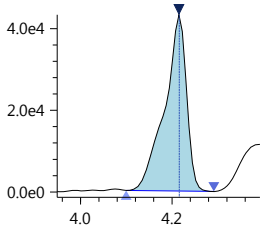
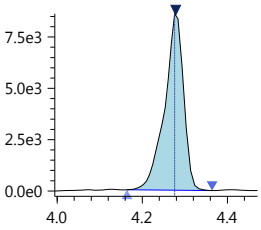
Conc 0.1155
RT 4.215 Area 142496
Q 313.00>269.00 (-) 4.34e4



HPFO_DA
Conc 0.1015
RT 4.279 Area 26526
Q 329.00>169.00 (-) 8.63e3



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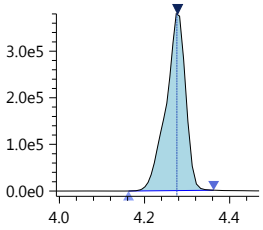
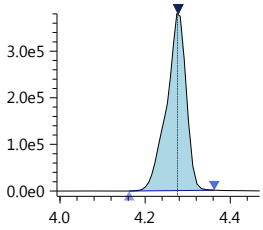
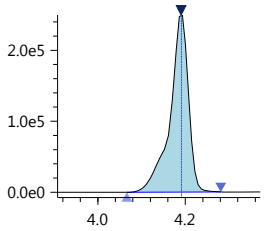
Conc 5.0000
RT 4.278 Area 1217839
ISTD 332.00>286.80 (-) 3.80e5



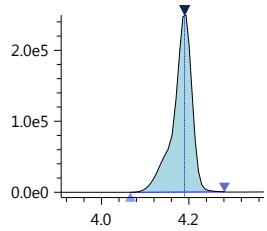
HFPO_DA-13C
Conc 5.0113
RT 4.278 Area 1217839
Q 332.00>286.80 (-) 3.80e5



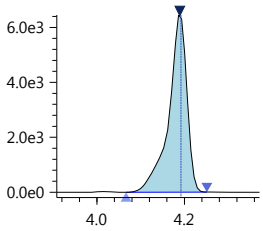
4_2-FTS-13C_IS
Conc 5.0000
RT 4.190 Area 725616
ISTD 328.80>309.05 (-) 2.50e5



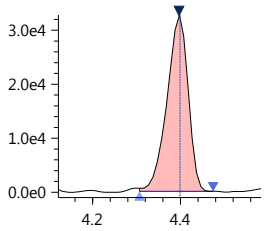
4_2-FTS-13C
Conc 4.9659
RT 4.190 Area 725616
Q 328.80>309.05 (-) 2.50e5



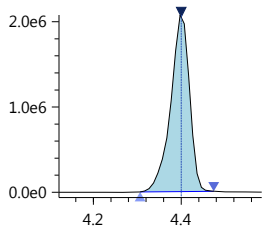
4_2-FTS_1
Conc 0.1103
RT 4.189 Area 18510
Q 327.00>307.05 (-) 6.45e3



PFHpA
Conc 0.0723
RT 4.397 Area 109088
Q 362.90>319.00 (-) 3.28e4



PFHpA-13C_IS
Conc 5.0000
RT 4.400 Area 6186615
ISTD 366.90>322.10 (-) 2.08e6



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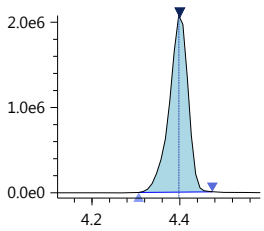
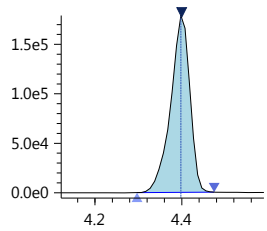
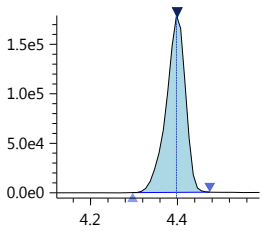
RT 4.400 Area 6186615
Q 366.90>322.10 (-) 2.08e6



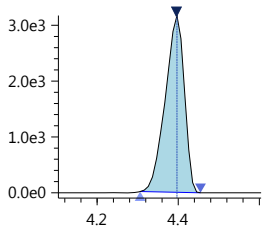
PFHxS-18O_IS
Conc 5.0000
RT 4.400 Area 550874
ISTD 402.70>84.05 (-) 1.79e5



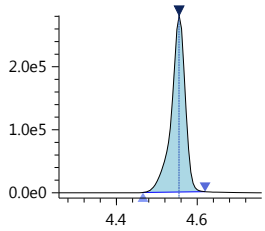
PFHxS-18O
Conc 4.8833
RT 4.400 Area 550874
Q 402.70>84.05 (-) 1.79e5



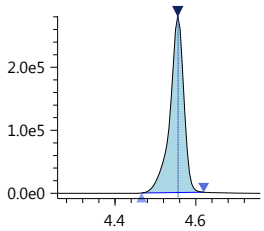
PFHxS_1
Conc 0.0863
RT 4.396 Area 10349
Q 399.00>80.00 (-) 3.18e3



6_2-FTS-13C
Conc 5.1576
RT 4.556 Area 666702
Q 428.90>409.00 (-) 2.81e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.556 Area 666702
ISTD 428.90>409.00 (-) 2.81e5



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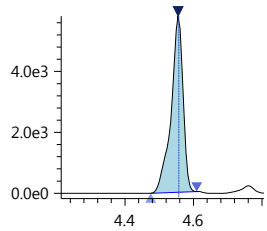
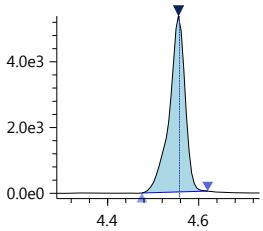
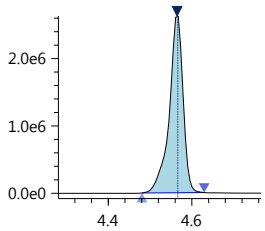
Conc 0.0969
RT 4.555 Area 13976
Q 427.00>407.00 (-) 5.82e3



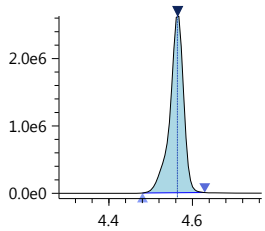
PFHpS_1
Conc 0.0953
RT 4.556 Area 12905
Q 449.00>80.15 (-) 5.39e3



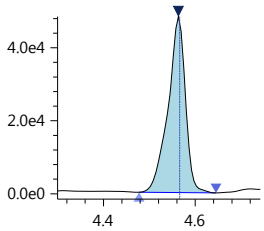
PFOA-13C_IS
Conc 5.0000
RT 4.564 Area 6024297
ISTD 416.80>372.05 (-) 2.63e6



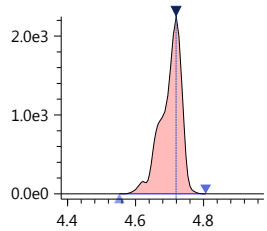
PFOA-13C
Conc 5.2507
RT 4.564 Area 6024297
Q 416.80>372.05 (-) 2.63e6



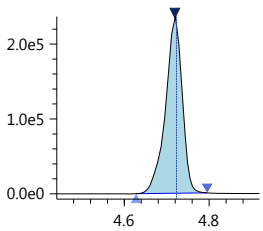
PFOA
Conc 0.1026
RT 4.563 Area 126957
Q 413.00>369.00 (-) 4.85e4



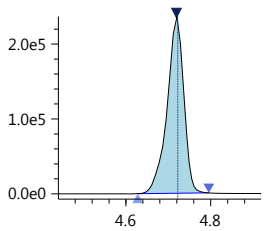
PFOS_1
Conc 0.0973
RT 4.719 Area 8479
Q 499.00>80.00 (-) 2.25e3



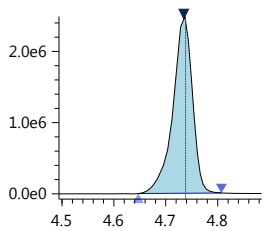
PFOS-13C_IS
Conc 5.0000
RT 4.719 Area 639816
ISTD 502.80>80.05 (-) 2.37e5



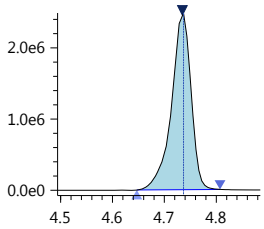
PFOS-13C
Conc 4.7805
RT 4.719 Area 639816
Q 502.80>80.05 (-) 2.37e5



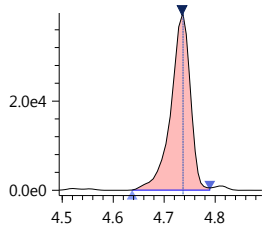
PFNA-13C_IS
Conc 5.0000
RT 4.735 Area 6466189
ISTD 467.80>423.00 (-) 2.49e6



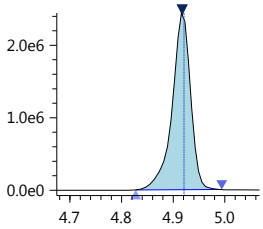
PFNA-13C
Conc 5.0249
RT 4.735 Area 6466189
Q 467.80>423.00 (-) 2.49e6



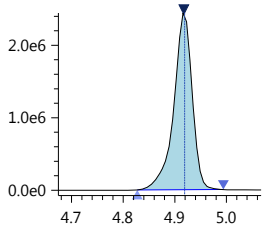
PFNA
Conc 0.1019
RT 4.735 Area 104657
Q 463.00>418.90 (-) 3.98e4



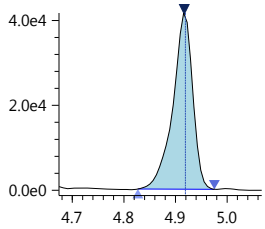
PFDA-13C_IS
Conc 5.0000
RT 4.918 Area 6044898
ISTD 514.80>469.95 (-) 2.45e6



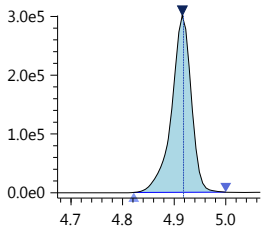
PFDA-13C
Conc 4.9796
RT 4.918 Area 6044898
Q 514.80>469.95 (-) 2.45e6



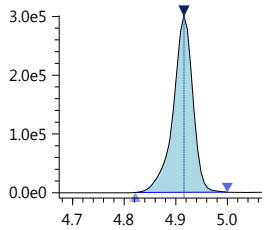
PFDA
Conc 0.1125
RT 4.917 Area 110988
Q 513.00>468.80 (-) 4.18e4



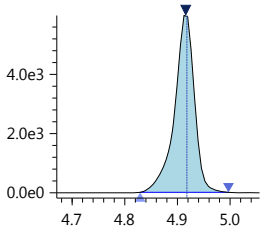
8_2-FTS-13C_IS
Conc 5.0000
RT 4.916 Area 795020
ISTD 528.80>509.00 (-) 3.01e5



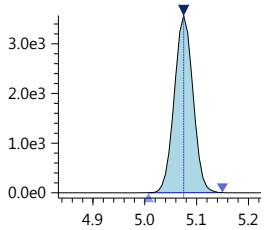
8_2-FTS-13C
Conc 5.2714
RT 4.916 Area 795020
Q 528.80>509.00 (-) 3.01e5



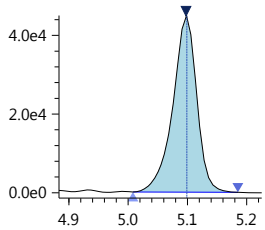
8_2-FTS_1
Conc 0.1030
RT 4.916 Area 15669
Q 527.10>506.90 (-) 5.99e3



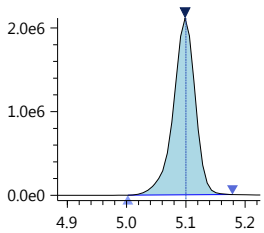
PFDS_1
Conc 0.0845
RT 5.075 Area 8956
Q 599.00>79.90 (-) 3.57e3



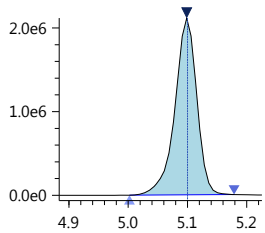
PFUnA
Conc 0.1099
RT 5.098 Area 125856
Q 563.00>518.90 (-) 4.51e4



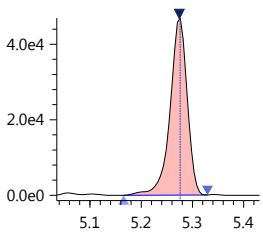
PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5433308
ISTD 564.80>519.95 (-) 2.12e6



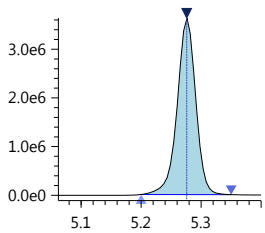
PFUnA-13C
Conc 4.9744
RT 5.099 Area 5433308
Q 564.80>519.95 (-) 2.12e6



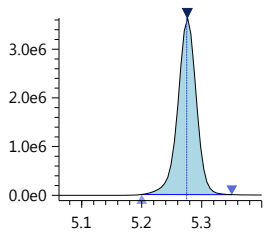
PFDoA
Conc 0.1066
RT 5.274 Area 108705
Q 613.05>569.00 (-) 4.69e4



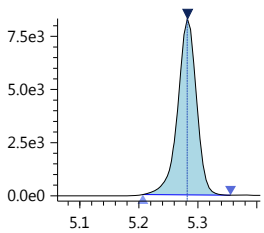
PFDoA-13C
Conc 4.8894
RT 5.276 Area 7778946
Q 614.80>569.95 (-) 3.64e6



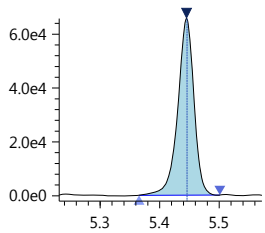
PFDoA-13C_IS
Conc 5.0000
RT 5.276 Area 7778946
ISTD 614.80>569.95 (-) 3.64e6



10_2-FtS_1
Conc 0.1002
RT 5.283 Area 18315
Q 627.00>606.95 (-) 8.34e3



PFTrDA
Conc 0.1011
RT 5.445 Area 124161
Q 663.00>618.90 (-) 6.58e4



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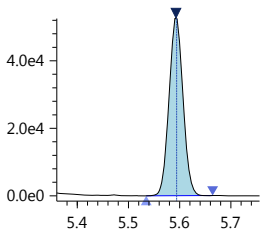
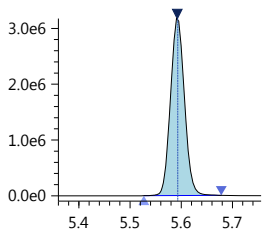
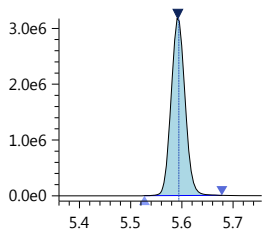
Conc 0.1005
RT 5.593 Area 100133
Q 713.40>669.00 (-) 5.25e4



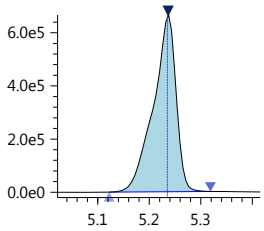
PFTeDA-13C
Conc 5.1283
RT 5.592 Area 6041068
Q 714.70>669.90 (-) 3.18e6



PFTeDA-13C_IS
Conc 5.0000
RT 5.592 Area 6041068
ISTD 714.70>669.90 (-) 3.18e6



FOSA-13C_IS
Conc 5.0000
RT 5.237 Area 2025489
ISTD 506.00>78.05 (-) 6.67e5



FOSA-13C
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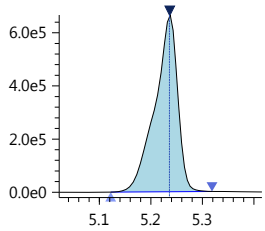
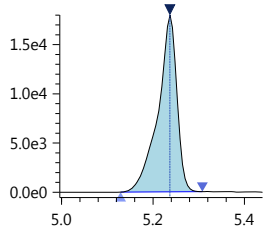
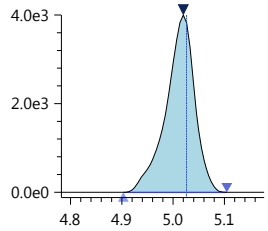
RT 5.237 Area 2025489
Q 506.00>78.05 (-) 6.67e5



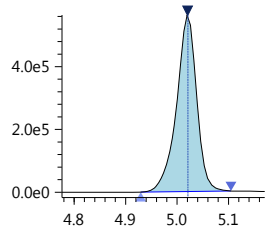
FOSA
Conc 0.0964
RT 5.237 Area 51337
Q 498.20>78.00 (-) 1.80e4



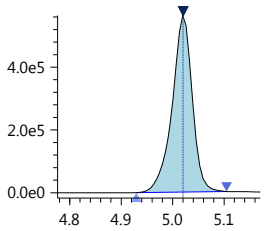
N-MeFOSAA
Conc 0.0817
RT 5.020 Area 15409
Q 570.20>419.00 (-) 4.00e3



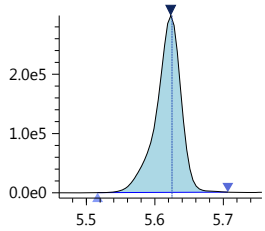
N-MeFOSAA-d3
Conc 5.1316
RT 5.020 Area 1530234
Q 572.80>419.05 (-) 5.65e5



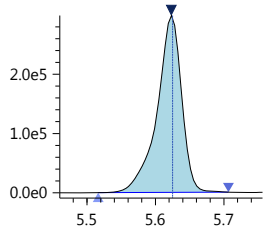
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.020 Area 1530234
ISTD 572.80>419.05 (-) 5.65e5



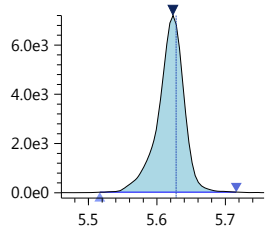
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.623 Area 743352
ISTD 514.90>168.90 (-) 2.99e5



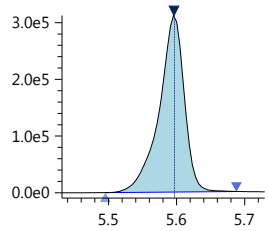
N-MeFOSA-d3
Conc 5.0058
RT 5.623 Area 743352
Q 514.90>168.90 (-) 2.99e5



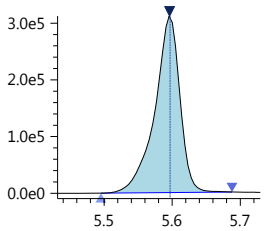
N-MeFOSA
Conc 0.1046
RT 5.623 Area 18419
Q 512.00>169.10 (-) 7.20e3



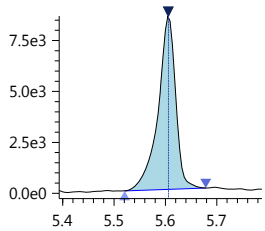
N-MeFOSE-d7
Conc 5.0658
RT 5.596 Area 795519
Q 622.70>59.10 (-) 3.13e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.596 Area 795519
ISTD 622.70>59.10 (-) 3.13e5



N-MeFOSE
Conc 0.0983
RT 5.606 Area 20197
Q 616.00>59.00 (-) 8.70e3



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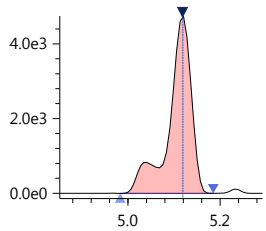
Conc 0.0867
RT 5.118 Area 15917
Q 584.20>418.95 (-) 4.75e3



N-EtFOSAA-d5_IS
Conc 5.0000
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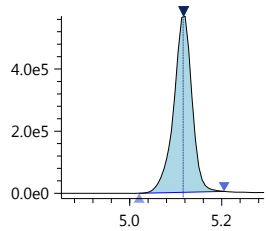
ISTD 588.80>419.00 (-) 5.71e5



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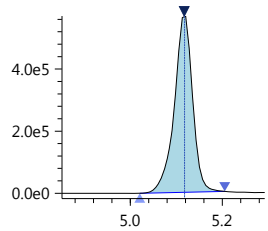

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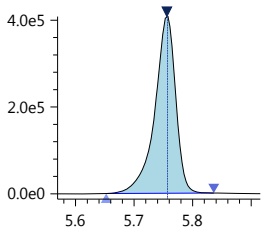
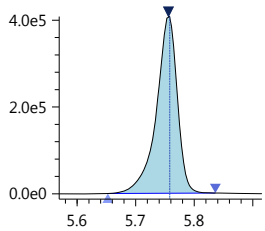
RT 5.756 Area 1011501
ISTD 530.90>169.15 (-) 4.08e5



N-EtFOSA-d9
Conc 4.9193
RT 5.756 Area 1011501
Q 530.90>169.15 (-) 4.08e5



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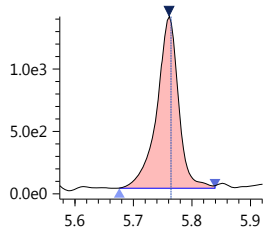
Conc 0.1048
RT 5.761 Area 3532
Q 526.90>169.10 (-) 1.42e3



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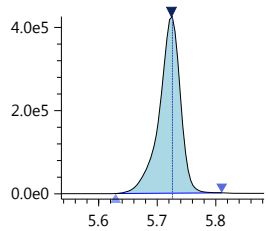
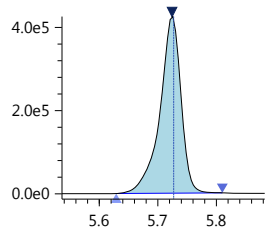
Conc 5.0000
RT 5.724 Area 1061324
ISTD 638.70>59.10 (-) 4.26e5

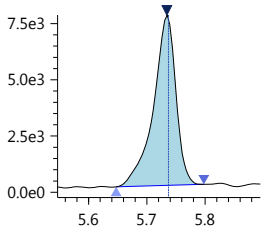


N-EtFOSE-d9
Conc 4.8965
RT 5.724 Area 1061324
Q 638.70>59.10 (-) 4.26e5



N-EtFOSE

Conc 0.1016
RT 5.734 Area 20198
Q 630.00>58.90 (-) 7.88e3



13C7-PFUnDA_IS

Conc 5.0000
RT 5.098 Area 6286936
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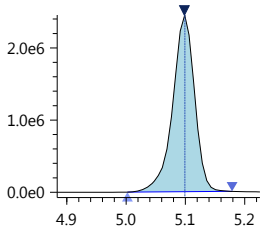
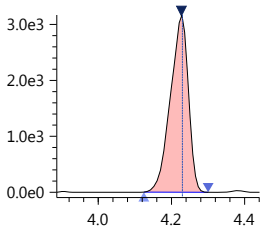


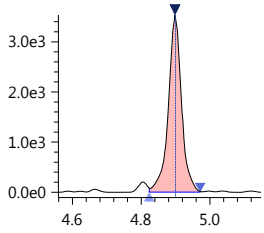
PFPeS

Conc 0.1082
RT 4.227 Area 10759
Q 349.00>99.00 (-) 3.17e3



PFNS

Conc 0.1050
RT 4.899 Area 9404
Q 549.00>99.00 (-) 3.54e3



190301_009

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Acquired by: System Administrator
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Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
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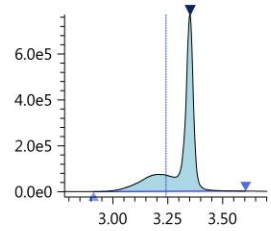

PFBA-13C
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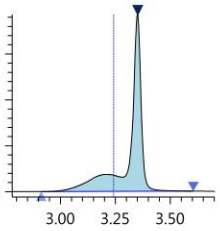
Q 216.90>172.15 (-) 7.72e5



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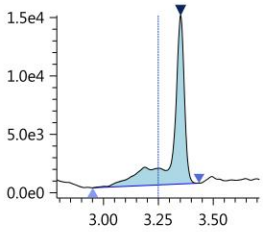
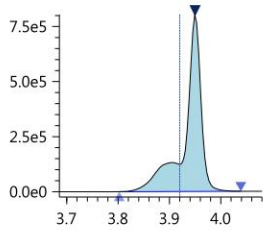
Conc 0.1038
RT 3.351 Area 53978
Q 213.00>169.10 (-) 1.52e4



PFPeA-13C_IS
Conc 5.0000
RT 3.950 Area 1757353
ISTD 267.90>223.00 (-) 8.05e5



PFPeA-13C
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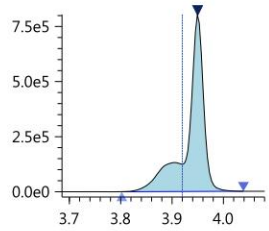
Q 267.90>223.00 (-) 8.05e5



PFPeA
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RT 3.951 Area 180591
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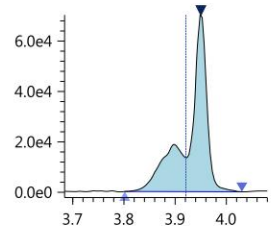

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Conc 0.0889
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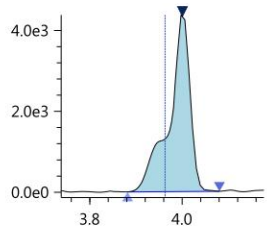
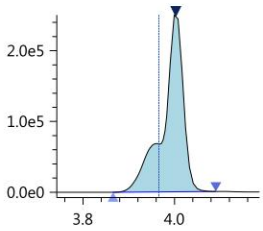
Q 299.00>80.00 (-) 4.38e3



PFBS-13C
Conc 4.6815
RT 4.003 Area 767752
Q 301.80>80.00 (-) 2.50e5



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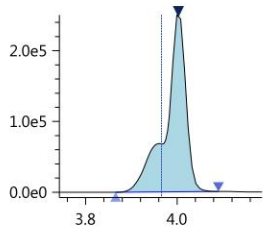
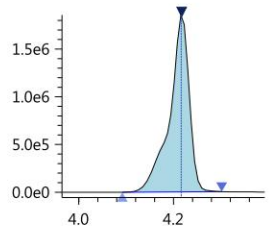


PFHxA-13C_IS
Conc 5.0000
RT 4.217 Area 5302235
ISTD 314.90>270.10 (-) 1.86e6



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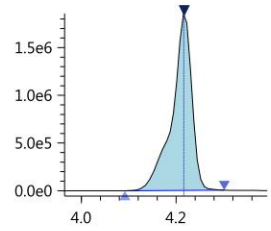
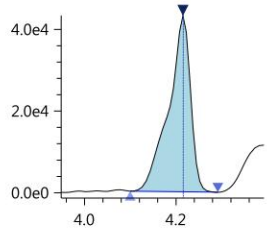
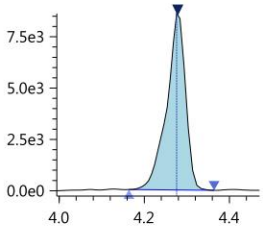
RT 4.217 Area 5302235
Q 314.90>270.10 (-) 1.86e6



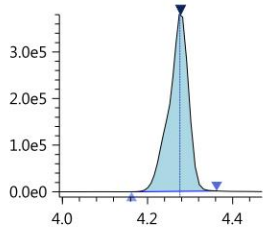
PFHxA
Conc 0.1297
RT 4.215 Area 142496
Q 313.00>269.00 (-) 4.34e4



HPFO_DA
Conc 0.1015
RT 4.279 Area 26526
Q 329.00>169.00 (-) 8.63e3



HFPO_DA-13C_IS
Conc 5.0000
RT 4.278 Area 1217839
ISTD 332.00>286.80 (-) 3.80e5



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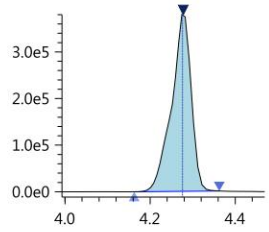
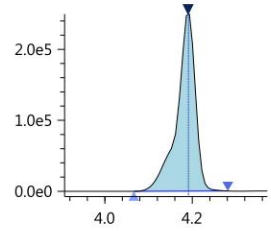
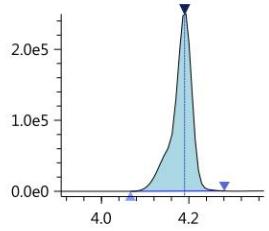
Conc 5.0113
RT 4.278 Area 1217839
Q 332.00>286.80 (-) 3.80e5



4_2-FTS-13C_IS
Conc 5.0000
RT 4.190 Area 725616
ISTD 328.80>309.05 (-) 2.50e5



4_2-FTS-13C
Conc 4.9659
RT 4.190 Area 725616
Q 328.80>309.05 (-) 2.50e5



4_2-FTS_1
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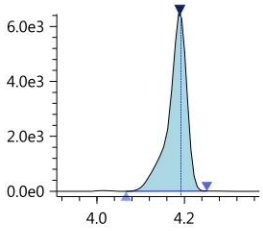
RT 4.189 Area 18510
Q 327.00>307.05 (-) 6.45e3



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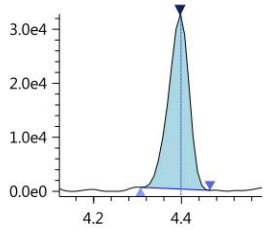
Conc 0.0913
RT 4.397 Area 106315
Q 362.90>319.00 (-) 3.28e4



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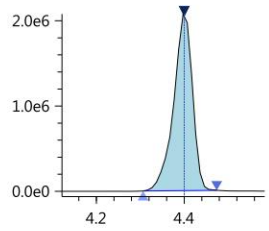
ISTD 366.90>322.10 (-) 2.08e6



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Conc 5.3747
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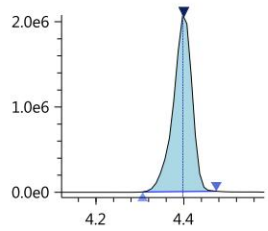
Q 366.90>322.10 (-) 2.08e6



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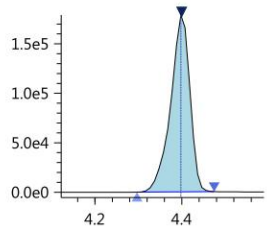

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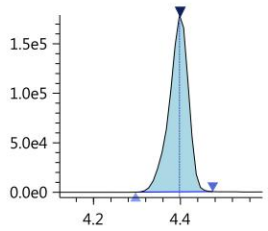
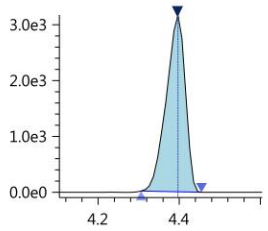
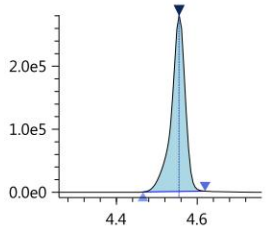
Q 402.70>84.05 (-) 1.79e5



PFHxS_1
Conc 0.0904
RT 4.396 Area 10349
Q 399.00>80.00 (-) 3.18e3



6_2-FTS-13C
Conc 5.1576
RT 4.556 Area 666702
Q 428.90>409.00 (-) 2.81e5



6_2-FTS-13C_IS
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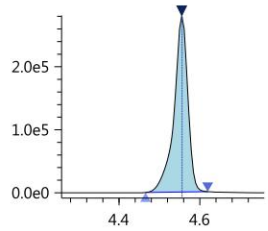
ISTD 428.90>409.00 (-) 2.81e5



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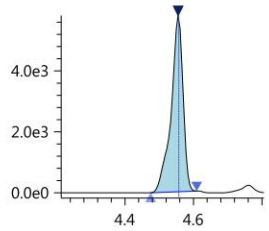
Conc 0.1017
RT 4.555 Area 13976
Q 427.00>407.00 (-) 5.82e3



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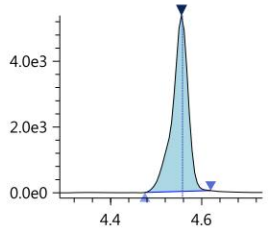
RT 4.556 Area 12905
Q 449.00>80.15 (-) 5.39e3



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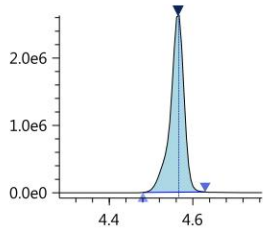

PFOA-13C
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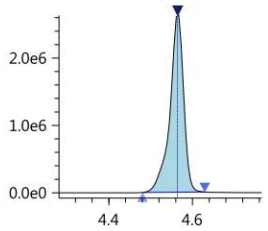
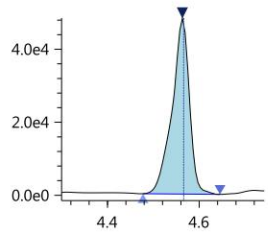
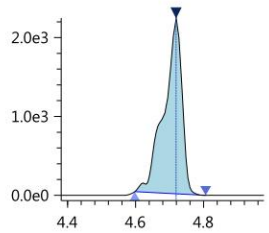
Q 416.80>372.05 (-) 2.63e6



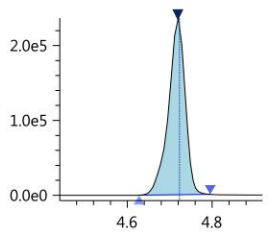
PFOA
Conc 0.1145
RT 4.563 Area 126957
Q 413.00>369.00 (-) 4.85e4



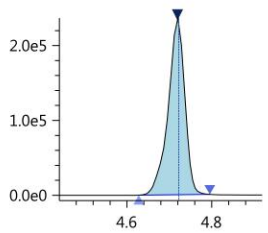
PFOS_1
Conc 0.0944
RT 4.719 Area 8157
Q 499.00>80.00 (-) 2.25e3



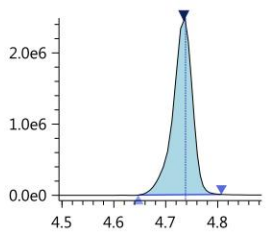
PFOS-13C_IS
Conc 5.0000
RT 4.719 Area 639816
ISTD 502.80>80.05 (-) 2.37e5



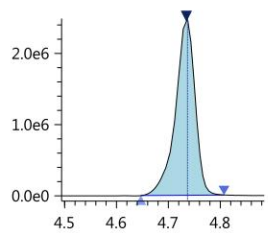
PFOS-13C
Conc 4.7805
RT 4.719 Area 639816
Q 502.80>80.05 (-) 2.37e5



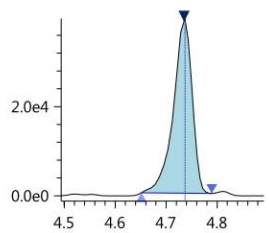
PFNA-13C_IS
Conc 5.0000
RT 4.735 Area 6466189
ISTD 467.80>423.00 (-) 2.49e6



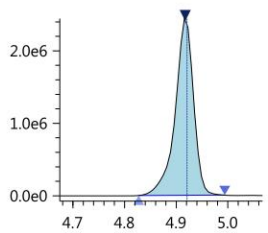
PFNA-13C
Conc 5.0249
RT 4.735 Area 6466189
Q 467.80>423.00 (-) 2.49e6



PFNA
Conc 0.1059
RT 4.735 Area 99772
Q 463.00>418.90 (-) 3.98e4



PFDA-13C_IS
Conc 5.0000
RT 4.918 Area 6044898
ISTD 514.80>469.95 (-) 2.45e6



PFDA-13C
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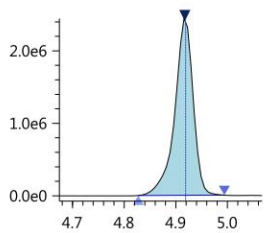
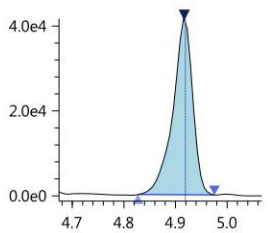
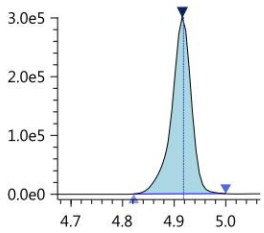
RT 4.918 Area 6044898
Q 514.80>469.95 (-) 2.45e6



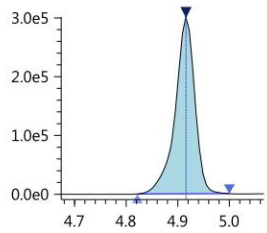
PFDA
Conc 0.1125
RT 4.917 Area 110988
Q 513.00>468.80 (-) 4.18e4



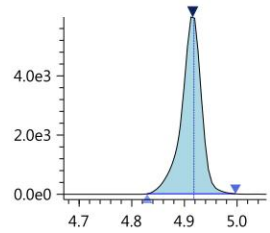
8_2-FTS-13C_IS
Conc 5.0000
RT 4.916 Area 795020
ISTD 528.80>509.00 (-) 3.01e5



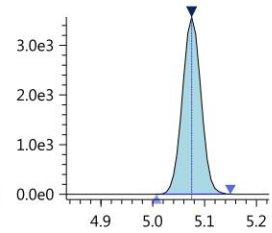
8_2-FTS-13C
Conc 5.2714
RT 4.916 Area 795020
Q 528.80>509.00 (-) 3.01e5



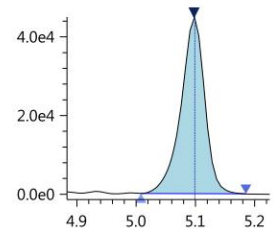
8_2-FTS_1
Conc 0.1042
RT 4.916 Area 15669
Q 527.10>506.90 (-) 5.99e3



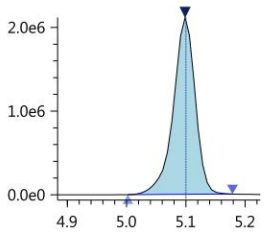
PFDS_1
Conc 0.0897
RT 5.075 Area 8956
Q 599.00>79.90 (-) 3.57e3



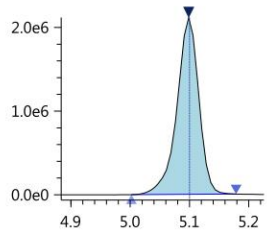
PFUnA
Conc 0.1244
RT 5.098 Area 125856
Q 563.00>518.90 (-) 4.51e4



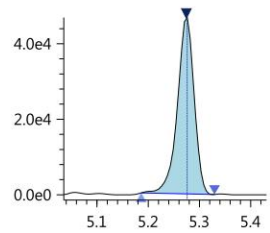
PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5433308
ISTD 564.80>519.95 (-) 2.12e6



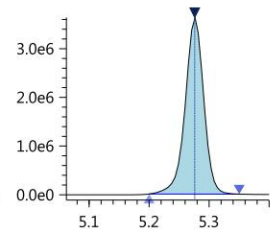
PFUnA-13C
Conc 4.9744
RT 5.099 Area 5433308
Q 564.80>519.95 (-) 2.12e6



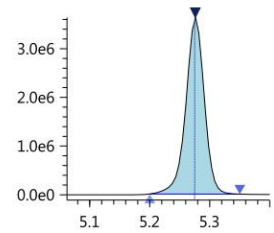
PFDoA
Conc 0.1094
RT 5.274 Area 106361
Q 613.05>569.00 (-) 4.69e4



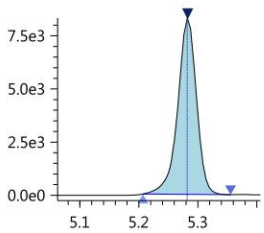
PFDoA-13C
Conc 4.8894
RT 5.276 Area 7778946
Q 614.80>569.95 (-) 3.64e6



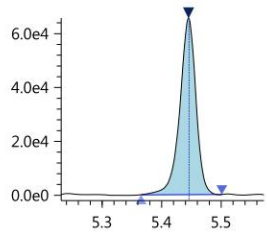
PFDoA-13C_IS
Conc 5.0000
RT 5.276 Area 7778946
ISTD 614.80>569.95 (-) 3.64e6



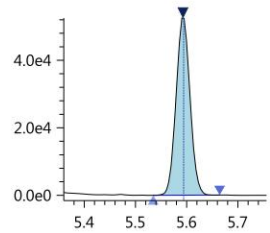
10_2-FtS_1
Conc 0.1002
RT 5.283 Area 18315
Q 627.00>606.95 (-) 8.34e3



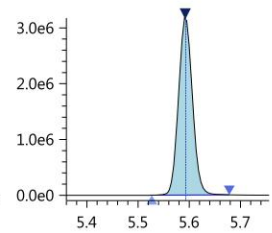
PFTrDA
Conc 0.1078
RT 5.445 Area 124161
Q 663.00>618.90 (-) 6.58e4



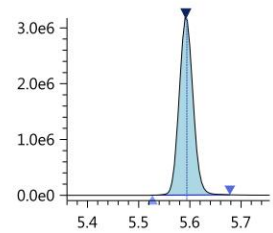
PFTeDA
Conc 0.1441
RT 5.593 Area 100133
Q 713.40>669.00 (-) 5.25e4



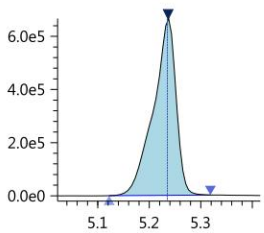
PFTeDA-13C
Conc 5.1283
RT 5.592 Area 6041068
Q 714.70>669.90 (-) 3.18e6



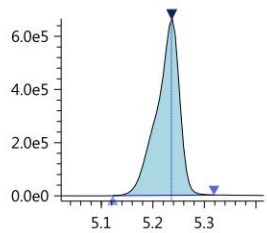
PFTeDA-13C_IS
Conc 5.0000
RT 5.592 Area 6041068
ISTD 714.70>669.90 (-) 3.18e6



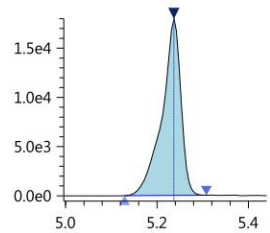
FOSA-13C_IS
Conc 5.0000
RT 5.237 Area 2025489
ISTD 506.00>78.05 (-) 6.67e5



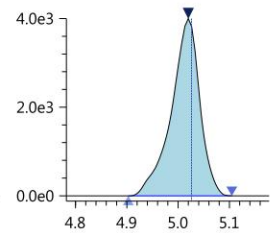
FOSA-13C
Conc 4.9567
RT 5.237 Area 2025489
Q 506.00>78.05 (-) 6.67e5



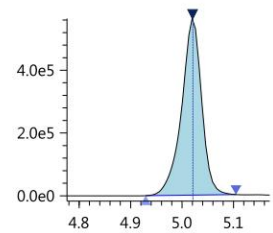
FOSA
Conc 0.0964
RT 5.237 Area 51337
Q 498.20>78.00 (-) 1.80e4



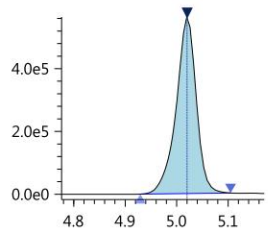
N-MeFOSAA
Conc 0.0824
RT 5.020 Area 15409
Q 570.20>419.00 (-) 4.00e3



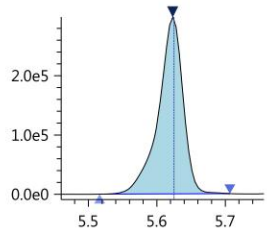
N-MeFOSAA-d3
Conc 5.1316
RT 5.020 Area 1530234
Q 572.80>419.05 (-) 5.65e5



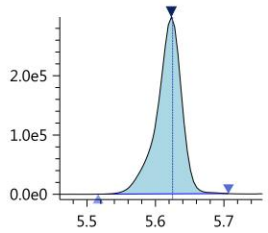
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.020 Area 1530234
ISTD 572.80>419.05 (-) 5.65e5



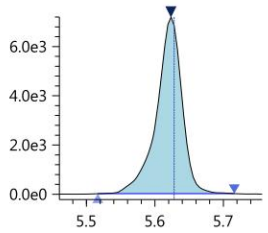
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.623 Area 743352
ISTD 514.90>168.90 (-) 2.99e5



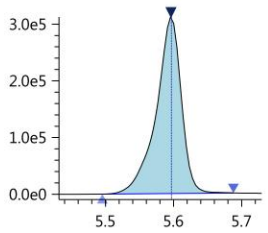
N-MeFOSA-d3
Conc 5.0058
RT 5.623 Area 743352
Q 514.90>168.90 (-) 2.99e5



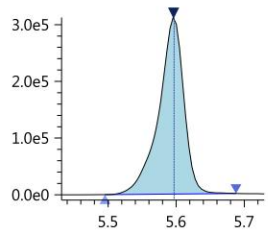
N-MeFOSA
Conc 0.1046
RT 5.623 Area 18419
Q 512.00>169.10 (-) 7.20e3



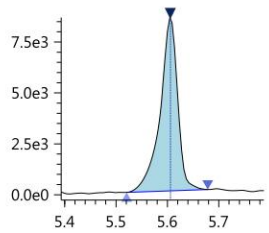
N-MeFOSE-d7
Conc 5.0658
RT 5.596 Area 795519
Q 622.70>59.10 (-) 3.13e5



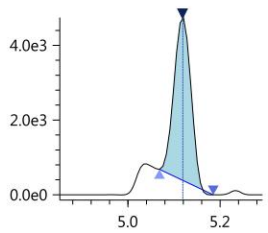
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.596 Area 795519
ISTD 622.70>59.10 (-) 3.13e5



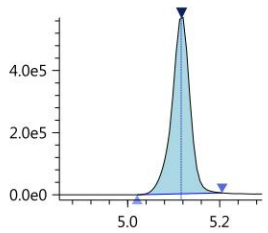
N-MeFOSE
Conc 0.0983
RT 5.606 Area 20197
Q 616.00>59.00 (-) 8.70e3



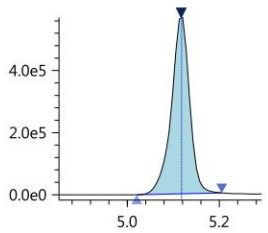
N-EtFOSAA
Conc 0.0596
RT 5.118 Area 11116
Q 584.20>418.95 (-) 4.75e3



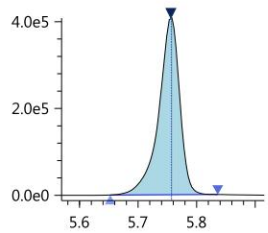
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1570873
ISTD 588.80>419.00 (-) 5.71e5



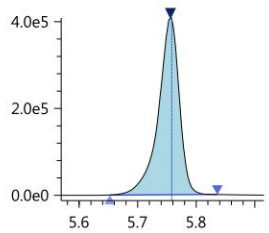
N-EtFOSAA-d5
Conc 5.2804
RT 5.117 Area 1570873
Q 588.80>419.00 (-) 5.71e5



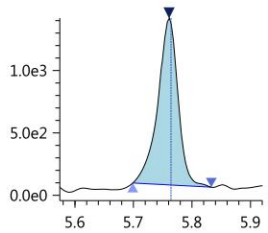
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.756 Area 1011501
ISTD 530.90>169.15 (-) 4.08e5



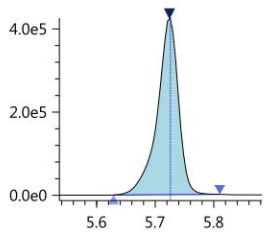
N-EtFOSA-d9
Conc 4.9193
RT 5.756 Area 1011501
Q 530.90>169.15 (-) 4.08e5



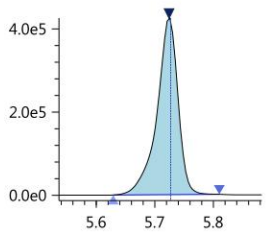
N-EtFOSA
Conc 0.0962
RT 5.761 Area 3201
Q 526.90>169.10 (-) 1.42e3



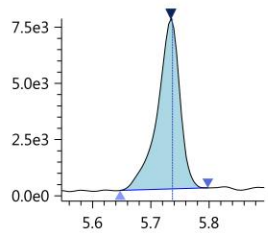
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 1061324
ISTD 638.70>59.10 (-) 4.26e5



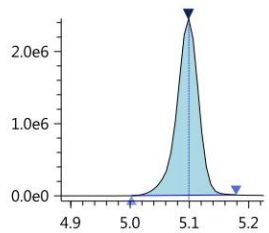
N-EtFOSE-d9
Conc 4.8965
RT 5.724 Area 1061324
Q 638.70>59.10 (-) 4.26e5



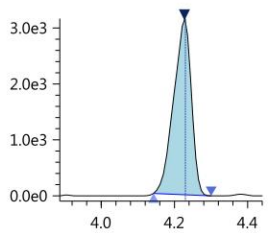
N-EtFOSE
Conc 0.1010
RT 5.734 Area 20198
Q 630.00>58.90 (-) 7.88e3



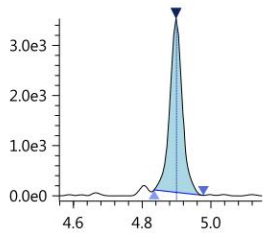
13C7-PFUnDA_IS
Conc 5.0000
RT 5.098 Area 6286936
ISTD 570.00>525.00 (-) 2.46e6



PFPeS
Conc 0.1070
RT 4.227 Area 10547
Q 349.00>99.00 (-) 3.17e3



PFNS
Conc 0.0996
RT 4.899 Area 8836
Q 549.00>99.00 (-) 3.54e3



190301_010

Sample ID: 0.50 PPB ICAL
Date acquired: 3/1/2019 4:58:41 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_010.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

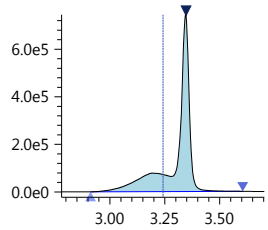
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.346	2736726	2736726	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.346	2736726	6741850	26	4.5584	ng/mL	5.0000
PFBA	Auto	3.345	267643	2736726	2	0.5163	ng/mL	0.5000
PFPeA-13C_IS	Auto	3.944	1763574	1763574	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.944	1763574	6741850	26	4.5315	ng/mL	5.0000
PFPeA	Auto	3.944	535200	1763574	4	0.5355	ng/mL	0.5000
PFBS_1	Auto	3.996	76942	812330	16	0.4414	ng/mL	0.4437
PFBS-13C	Auto	3.998	812330	6741850	26	4.6191	ng/mL	5.0000
PFBS-13C_IS	Auto	3.998	812330	812330	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.212	5639607	5639607	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.212	5639607	6741850	26	4.6991	ng/mL	5.0000
PFHxA	Auto	4.212	554131	5639607	6	0.5157	ng/mL	0.5000
HPFO_DA	Auto	4.274	118303	1227446	3	0.4491	ng/mL	0.5000
HFPO_DA-13C_IS	Auto	4.274	1227446	1227446	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.274	1227446	6741850	26	4.7101	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.185	696314	696314	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.185	696314	6741850	26	4.4439	ng/mL	5.0000
4_2-FTS_1	Auto	4.185	74857	696314	5	0.4650	ng/mL	0.4686
PFHpA	Auto	4.393	484513	5130604	8	0.5610	ng/mL	0.5000
PFHpA-13C_IS	Auto	4.393	5130604	5130604	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.393	5130604	6741850	26	4.1565	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.393	534962	534962	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.393	534962	6741850	26	4.4223	ng/mL	5.0000
PFHxS_1	Auto	4.385	56087	534962	7	0.4817	ng/mL	0.4565
6_2-FTS-13C	Auto	4.550	661683	6741850	26	4.7734	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.550	661683	661683	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.551	71120	823604	15	0.4761	ng/mL	0.4756
PFHpS_1	Auto	4.552	65814	534962	7	0.5003	ng/mL	0.4767
PFOA-13C_IS	Auto	4.560	5684055	5684055	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.560	5684055	6741850	26	4.6199	ng/mL	5.0000
PFOA	Auto	4.560	509797	5684055	9	0.5189	ng/mL	0.5000
PFOS_1	Auto	4.718	40106	628880	13	0.4681	ng/mL	0.4646
PFOS-13C_IS	Auto	4.719	628880	628880	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.719	628880	6741850	26	4.3818	ng/mL	5.0000
PFNA-13C_IS	Auto	4.736	6393291	6393291	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.736	6393291	6741850	26	4.6330	ng/mL	5.0000
PFNA	M	4.736	443633	6393291	11	0.4924	ng/mL	0.5000
PFDA-13C_IS	Auto	4.918	6146719	6146719	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.918	6146719	6741850	26	4.7219	ng/mL	5.0000
PFDA	Auto	4.918	482165	6146719	12	0.4807	ng/mL	0.5000
8_2-FTS-13C_IS	Auto	4.917	823604	823604	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.917	823604	6741850	26	5.0925	ng/mL	5.0000
8_2-FTS_1	Auto	4.916	79480	823604	15	0.5046	ng/mL	0.4800
PFDS_1	Auto	5.072	57631	628880	13	0.5530	ng/mL	0.4823
PFUnA	Auto	5.094	490572	5777314	14	0.5101	ng/mL	0.5000
PFUnA-13C_IS	Auto	5.095	5777314	5777314	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.095	5777314	6741850	26	4.9324	ng/mL	5.0000
PFDoA	Auto	5.271	508641	7940279	17	0.5254	ng/mL	0.5000
PFDoA-13C	Auto	5.270	7940279	6741850	26	4.6540	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.270	7940279	7940279	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.277	91573	823604	15	0.4834	ng/mL	0.4831
PFTrDA	Auto	5.437	542594	5822092	22	0.5084	ng/mL	0.5000
PFTeDA	Auto	5.585	264639	5822092	22	0.5186	ng/mL	0.5000
PFTeDA-13C	Auto	5.585	5822092	6741850	26	4.6089	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.585	5822092	5822092	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.232	2018686	2018686	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.232	2018686	6741850	26	4.6067	ng/mL	5.0000
FOSA	Auto	5.232	259535	2018686	18	0.4891	ng/mL	0.5000
N-MeFOSAA	Auto	5.020	95938	1493356	19	0.5210	ng/mL	0.5000
N-MeFOSAA-d3	Auto	5.018	1493356	6741850	26	4.6700	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.018	1493356	1493356	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.617	693371	693371	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.617	693371	6741850	26	4.3542	ng/mL	5.0000
N-MeFOSA	Auto	5.620	85813	693371	1	0.5224	ng/mL	0.5000
N-MeFOSE-d7	Auto	5.590	769786	6741850	26	4.5712	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.590	769786	769786	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.599	99955	769786	20	0.5027	ng/mL	0.5000

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.118	92350	1582552	21	0.4991	ng/mL	0.5000
N-EtFOSAA-d5_IS	Auto	5.114	1582552	1582552	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.114	1582552	6741850	26	4.9607	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.750	987479	987479	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.750	987479	6741850	26	4.4785	ng/mL	5.0000
N-EtFOSA	Auto	5.756	16268	987479	23	0.4942	ng/mL	0.5000
N-EtFOSE-d9_IS	Auto	5.718	1063547	1063547	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.718	1063547	6741850	26	4.5757	ng/mL	5.0000
N-EtFOSE	Auto	5.729	96050	1063547	24	0.4820	ng/mL	0.5000
13C7-PFUnDA_IS	Auto	5.095	6741850	6741850	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.226	45406	812330	16	0.4316	ng/mL	0.4705
PFNS	Auto	4.900	42821	628880	13	0.4864	ng/mL	0.4808

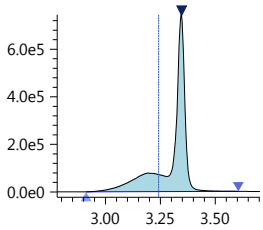
PFBA-13C_IS

Conc 5.0000
RT 3.346 Area 2736726
ISTD 216.90>172.15 (-) 7.45e5



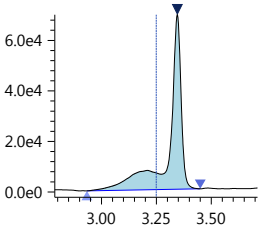
PFBA-13C

Conc 4.5584
RT 3.346 Area 2736726
Q 216.90>172.15 (-) 7.45e5



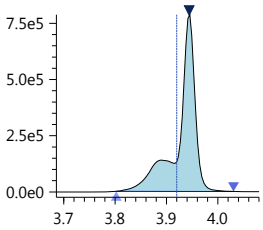
PFBA

Conc 0.5163
RT 3.345 Area 267643
Q 213.00>169.10 (-) 7.02e4



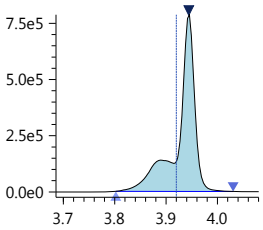
PFPeA-13C_IS

Conc 5.0000
RT 3.944 Area 1763574
ISTD 267.90>223.00 (-) 7.88e5



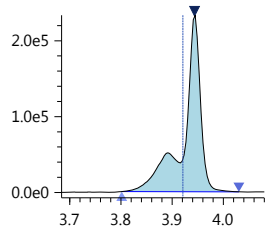
PFPeA-13C

Conc 4.5315
RT 3.944 Area 1763574
Q 267.90>223.00 (-) 7.88e5



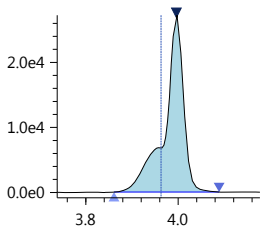
PFPeA

Conc 0.5355
RT 3.944 Area 535200
Q 263.05>219.10 (-) 2.34e5



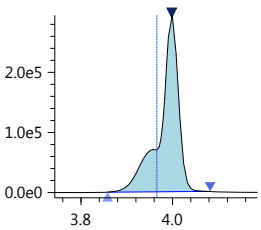
PFBS_1

Conc 0.4414
RT 3.996 Area 76942
Q 299.00>80.00 (-) 2.73e4



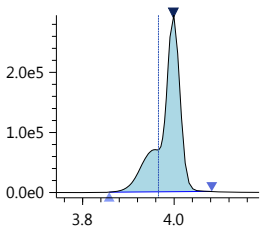
PFBS-13C

Conc 4.6191
RT 3.998 Area 812330
Q 301.80>80.00 (-) 2.95e5



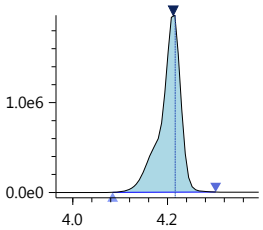
PFBS-13C_IS

Conc 5.0000
RT 3.998 Area 812330
ISTD 301.80>80.00 (-) 2.95e5



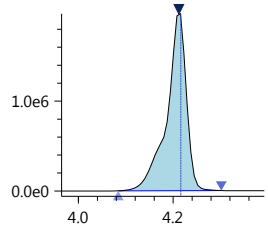
PFHxA-13C_IS

Conc 5.0000
RT 4.212 Area 5639607
ISTD 314.90>270.10 (-) 1.97e6



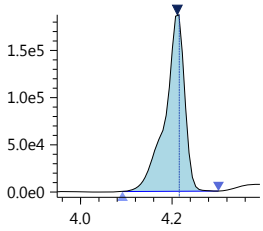
PFHxA-13C

Conc 4.6991
RT 4.212 Area 5639607
Q 314.90>270.10 (-) 1.97e6



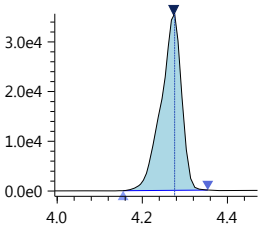
PFHxA

Conc 0.5157
RT 4.212 Area 554131
Q 313.00>269.00 (-) 1.88e5



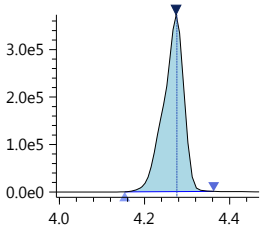
HPFO_DA

Conc 0.4491
RT 4.274 Area 118303
Q 329.00>169.00 (-) 3.57e4



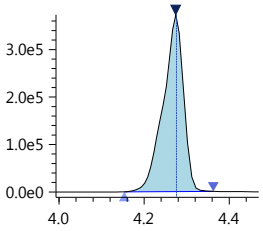
HFPO_DA-13C_IS

Conc 5.0000
RT 4.274 Area 1227446
ISTD 332.00>286.80 (-) 3.73e5

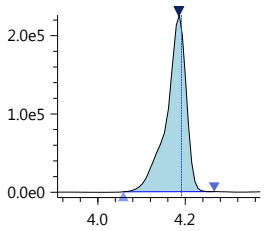


HFPO_DA-13C

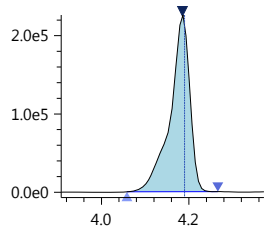
Conc 4.7101
RT 4.274 Area 1227446
Q 332.00>286.80 (-) 3.73e5



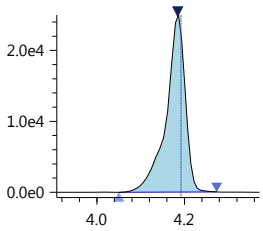
4_2-FTS-13C_IS
Conc 5.0000
RT 4.185 Area 696314
ISTD 328.80>309.05 (-) 2.26e5



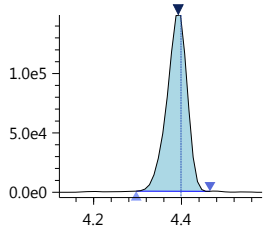
4_2-FTS-13C
Conc 4.4439
RT 4.185 Area 696314
Q 328.80>309.05 (-) 2.26e5



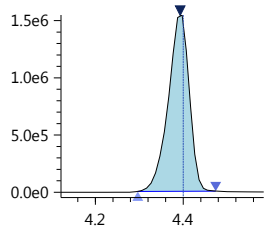
4_2-FTS_1
Conc 0.4650
RT 4.185 Area 74857
Q 327.00>307.05 (-) 2.50e4



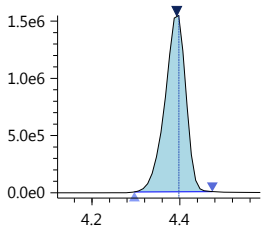
PFHpA
Conc 0.5610
RT 4.393 Area 484513
Q 362.90>319.00 (-) 1.49e5



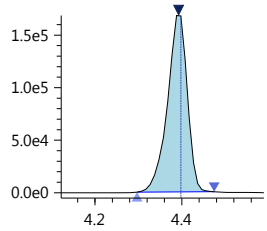
PFHpA-13C_IS
Conc 5.0000
RT 4.393 Area 5130604
ISTD 366.90>322.10 (-) 1.55e6



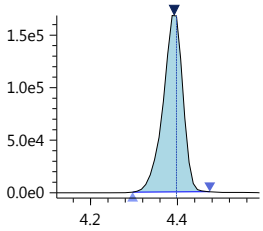
PFHpA-13C
Conc 4.1565
RT 4.393 Area 5130604
Q 366.90>322.10 (-) 1.55e6



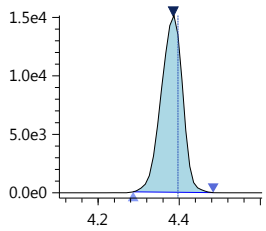
PFHxS-18O_IS
Conc 5.0000
RT 4.393 Area 534962
ISTD 402.70>84.05 (-) 1.69e5



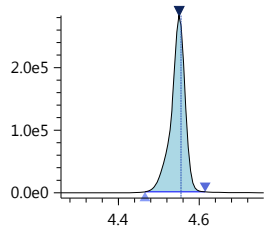
PFHxS-18O
Conc 4.4223
RT 4.393 Area 534962
Q 402.70>84.05 (-) 1.69e5



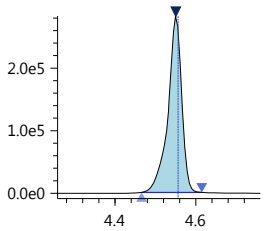
PFHxS_1
Conc 0.4817
RT 4.385 Area 56087
Q 399.00>80.00 (-) 1.52e4



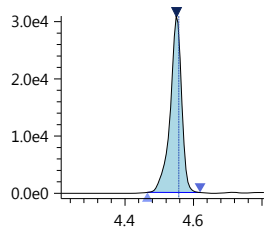
6_2-FTS-13C
Conc 4.7734
RT 4.550 Area 661683
Q 428.90>409.00 (-) 2.83e5



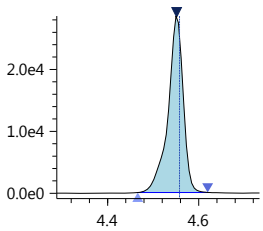
6_2-FTS-13C_IS
Conc 5.0000
RT 4.550 Area 661683
ISTD 428.90>409.00 (-) 2.83e5



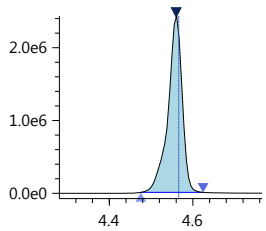
6_2-FTS_1
Conc 0.4761
RT 4.551 Area 71120
Q 427.00>407.00 (-) 3.10e4



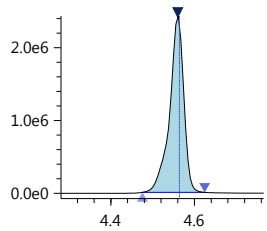
PFHpS_1
Conc 0.5003
RT 4.552 Area 65814
Q 449.00>80.15 (-) 2.86e4



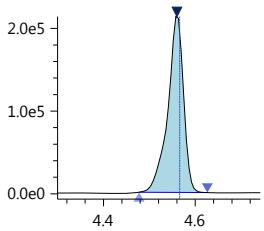
PFOA-13C_IS
Conc 5.0000
RT 4.560 Area 5684055
ISTD 416.80>372.05 (-) 2.43e6



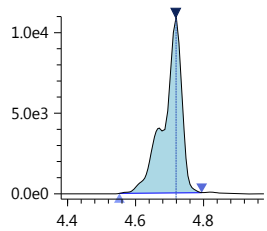
PFOA-13C
Conc 4.6199
RT 4.560 Area 5684055
Q 416.80>372.05 (-) 2.43e6



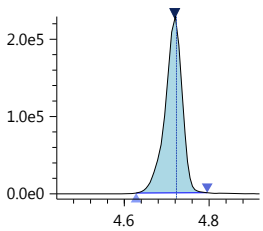
PFOA
Conc 0.5189
RT 4.560 Area 509797
Q 413.00>369.00 (-) 2.14e5



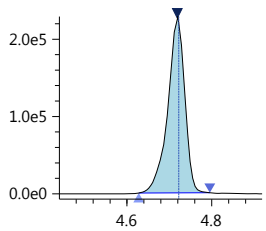
PFOS_1
Conc 0.4681
RT 4.718 Area 40106
Q 499.00>80.00 (-) 1.10e4



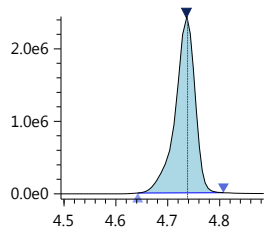
PFOS-13C_IS
Conc 5.0000
RT 4.719 Area 628880
ISTD 502.80>80.05 (-) 2.29e5



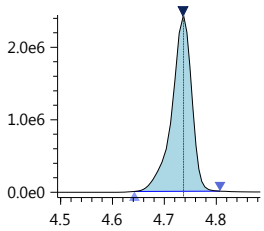
PFOS-13C
Conc 4.3818
RT 4.719 Area 628880
Q 502.80>80.05 (-) 2.29e5



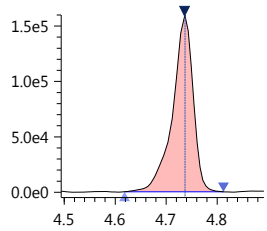
PFNA-13C_IS
Conc 5.0000
RT 4.736 Area 6393291
ISTD 467.80>423.00 (-) 2.45e6



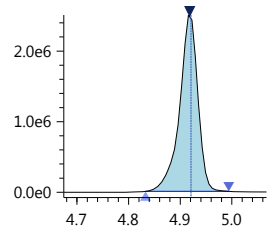
PFNA-13C
Conc 4.6330
RT 4.736 Area 6393291
Q 467.80>423.00 (-) 2.45e6



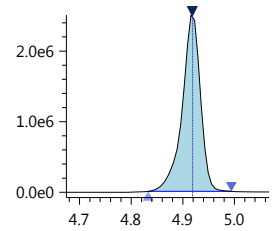
PFNA
Conc 0.4924
RT 4.736 Area 443633
Q 463.00>418.90 (-) 1.60e5



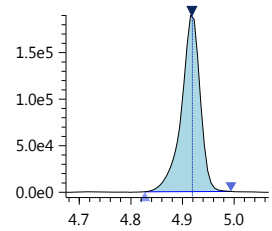
PFDA-13C_IS
Conc 5.0000
RT 4.918 Area 6146719
ISTD 514.80>469.95 (-) 2.51e6



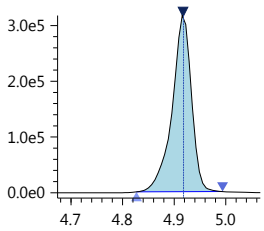
PFDA-13C
Conc 4.7219
RT 4.918 Area 6146719
Q 514.80>469.95 (-) 2.51e6



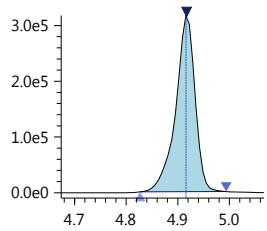
PFDA
Conc 0.4807
RT 4.918 Area 482165
Q 513.00>468.80 (-) 1.90e5



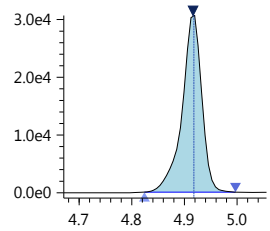
8_2-FTS-13C_IS
Conc 5.0000
RT 4.917 Area 823604
ISTD 528.80>509.00 (-) 3.18e5



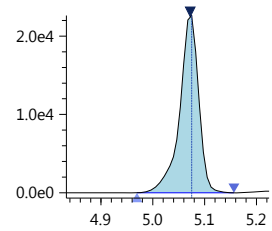
8_2-FTS-13C
Conc 5.0925
RT 4.917 Area 823604
Q 528.80>509.00 (-) 3.18e5



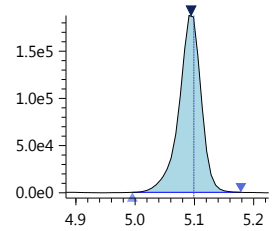
8_2-FTS_1
Conc 0.5046
RT 4.916 Area 79480
Q 527.10>506.90 (-) 3.07e4



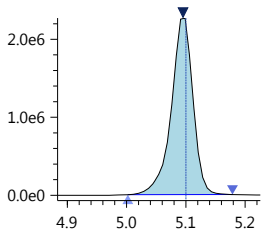
PFDS_1
Conc 0.5530
RT 5.072 Area 57631
Q 599.00>79.90 (-) 2.26e4



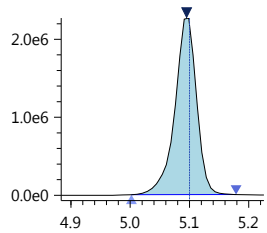
PFUnA
Conc 0.5101
RT 5.094 Area 490572
Q 563.00>518.90 (-) 1.88e5



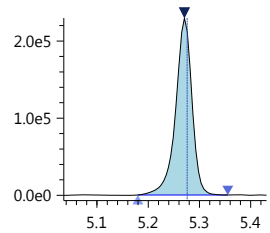
PFUnA-13C_IS
Conc 5.0000
RT 5.095 Area 5777314
ISTD 564.80>519.95 (-) 2.27e6



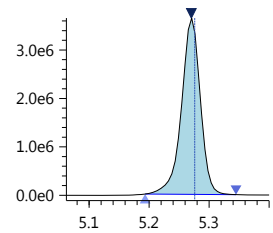
PFUnA-13C
Conc 4.9324
RT 5.095 Area 5777314
Q 564.80>519.95 (-) 2.27e6



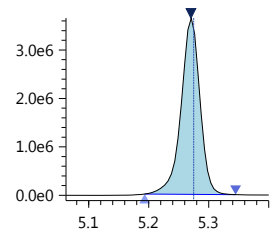
PFDoA
Conc 0.5254
RT 5.271 Area 508641
Q 613.05>569.00 (-) 2.30e5



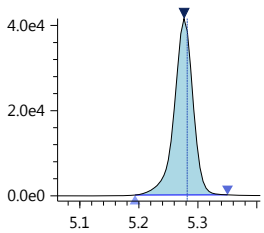
PFDoA-13C
Conc 4.6540
RT 5.270 Area 7940279
Q 614.80>569.95 (-) 3.66e6



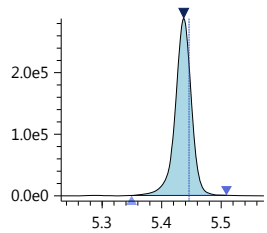
PFDoA-13C_IS
Conc 5.0000
RT 5.270 Area 7940279
ISTD 614.80>569.95 (-) 3.66e6



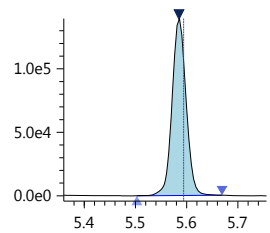
10_2-FtS_1
Conc 0.4834
RT 5.277 Area 91573
Q 627.00>606.95 (-) 4.16e4



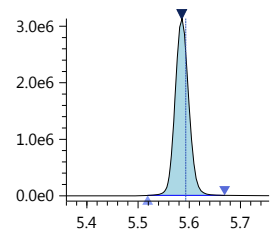
PFTrDA
Conc 0.5084
RT 5.437 Area 542594
Q 663.00>618.90 (-) 2.88e5



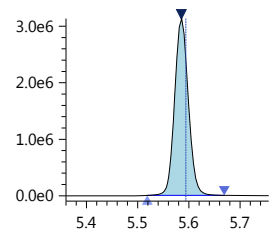
PFTeDA
Conc 0.5186
RT 5.585 Area 264639
Q 713.40>669.00 (-) 1.40e5



PFTeDA-13C
Conc 4.6089
RT 5.585 Area 5822092
Q 714.70>669.90 (-) 3.14e6

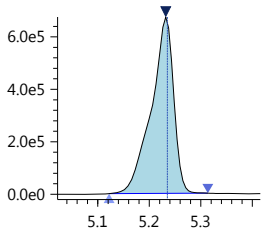


PFTeDA-13C_IS
Conc 5.0000
RT 5.585 Area 5822092
ISTD 714.70>669.90 (-) 3.14e6



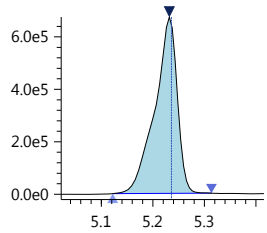
FOSA-13C_IS

Conc 5.0000
RT 5.232 Area 2018686
ISTD 506.00>78.05 (-) 6.76e5



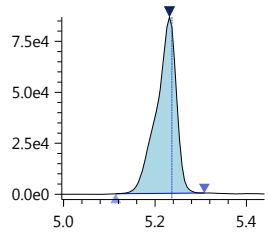
FOSA-13C

Conc 4.6067
RT 5.232 Area 2018686
Q 506.00>78.05 (-) 6.76e5



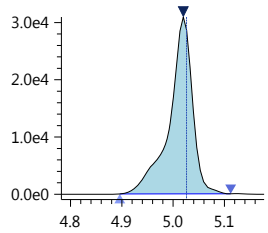
FOSA

Conc 0.4891
RT 5.232 Area 259535
Q 498.20>78.00 (-) 8.69e4



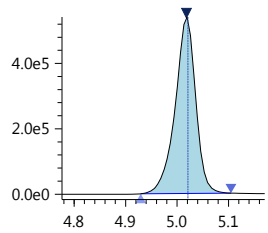
N-MeFOSAA

Conc 0.5210
RT 5.020 Area 95938
Q 570.20>419.00 (-) 3.10e4



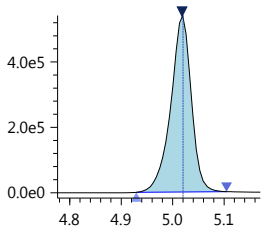
N-MeFOSAA-d3

Conc 4.6700
RT 5.018 Area 1493356
Q 572.80>419.05 (-) 5.42e5



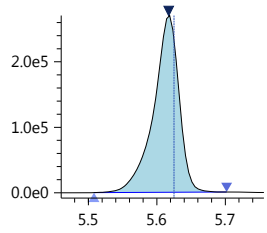
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.018 Area 1493356
ISTD 572.80>419.05 (-) 5.42e5



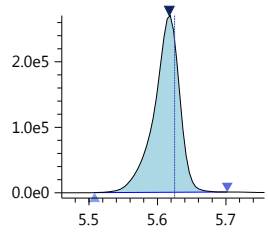
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 693371
ISTD 514.90>168.90 (-) 2.71e5



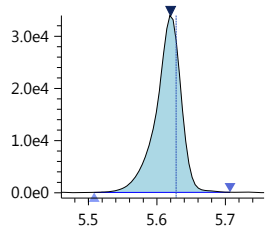
N-MeFOSA-d3

Conc 4.3542
RT 5.617 Area 693371
Q 514.90>168.90 (-) 2.71e5



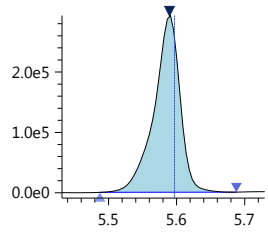
N-MeFOSA

Conc 0.5224
RT 5.620 Area 85813
Q 512.00>169.10 (-) 3.40e4



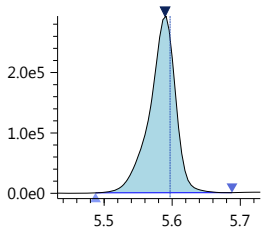
N-MeFOSE-d7

Conc 4.5712
RT 5.590 Area 769786
Q 622.70>59.10 (-) 2.94e5



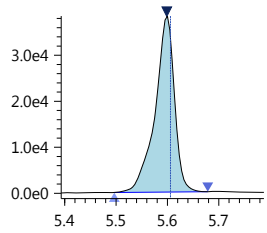
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.590 Area 769786
ISTD 622.70>59.10 (-) 2.94e5



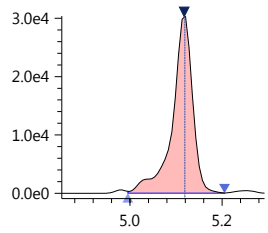
N-MeFOSE

Conc 0.5027
RT 5.599 Area 99955
Q 616.00>59.00 (-) 3.85e4



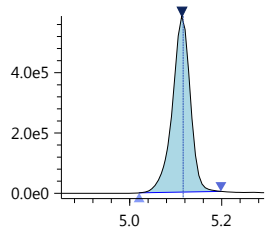
N-EtFOSAA

Conc 0.4991
RT 5.118 Area 92350
Q 584.20>418.95 (-) 3.04e4



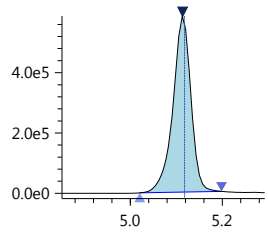
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.114 Area 1582552
ISTD 588.80>419.00 (-) 5.88e5



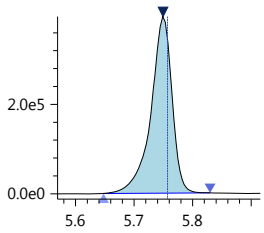
N-EtFOSAA-d5

Conc 4.9607
RT 5.114 Area 1582552
Q 588.80>419.00 (-) 5.88e5



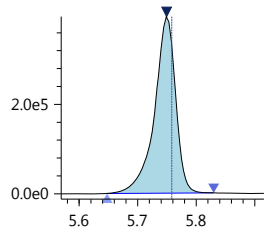
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.750 Area 987479
ISTD 530.90>169.15 (-) 3.96e5



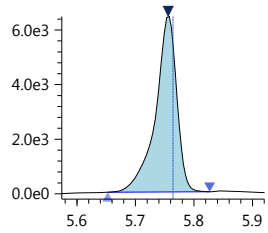
N-EtFOSA-d9

Conc 4.4785
RT 5.750 Area 987479
Q 530.90>169.15 (-) 3.96e5



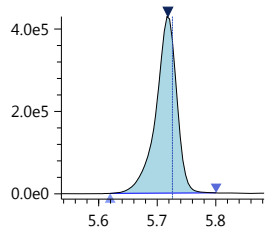
N-EtFOSA

Conc 0.4942
RT 5.756 Area 16268
Q 526.90>169.10 (-) 6.49e3



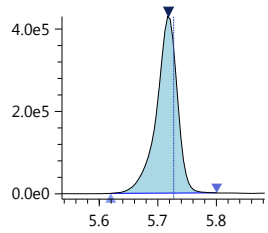
N-EtFOSE-d9_IS

Conc 5.0000
RT 5.718 Area 1063547
ISTD 638.70>59.10 (-) 4.30e5



N-EtFOSE-d9

Conc 4.5757
RT 5.718 Area 1063547
Q 638.70>59.10 (-) 4.30e5

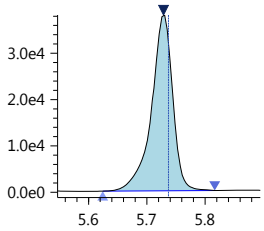


N-EtFOSE

Conc 0.4820

RT 5.729 Area 96050

Q 630.00>58.90 (-) 3.83e4

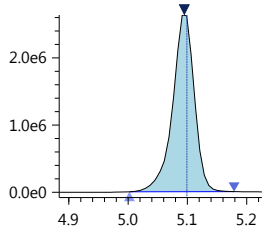


13C7-PFUnDA_IS

Conc 5.0000

RT 5.095 Area 6741850

ISTD 570.00>525.00 (-) 2.64e6

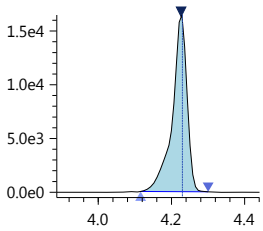


PFPeS

Conc 0.4316

RT 4.226 Area 45406

Q 349.00>99.00 (-) 1.65e4

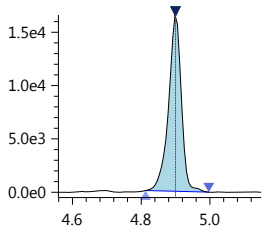


PFNS

Conc 0.4864

RT 4.900 Area 42821

Q 549.00>99.00 (-) 1.66e4



190301_010

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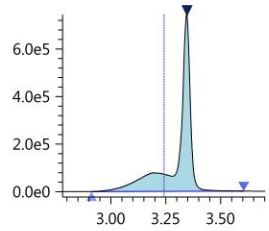
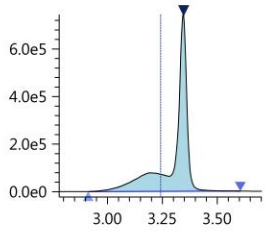
Date acquired: 3/1/2019 4:58:41 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_010.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

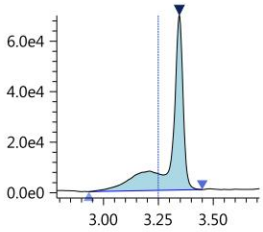
PFBA-13C_IS
Conc 5.0000
RT 3.346 Area 2736726
ISTD 216.90>172.15 (-) 7.45e5



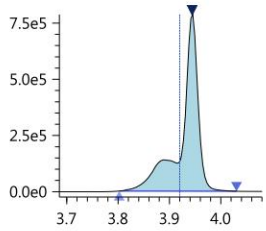
PFBA-13C
Conc 4.5584
RT 3.346 Area 2736726
Q 216.90>172.15 (-) 7.45e5



PFBA
Conc 0.5163
RT 3.345 Area 267643
Q 213.00>169.10 (-) 7.02e4



PFPeA-13C_IS
Conc 5.0000
RT 3.944 Area 1763574
ISTD 267.90>223.00 (-) 7.88e5



PFPeA-13C
Conc 4.5315
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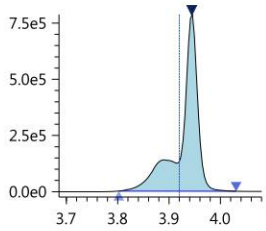
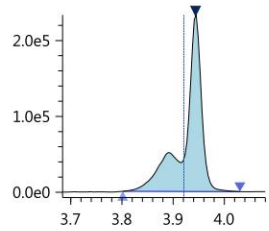
Q 267.90>223.00 (-) 7.88e5



PFPeA
Conc 0.4128
RT 3.944 Area 535200
Q 263.05>219.10 (-) 2.34e5



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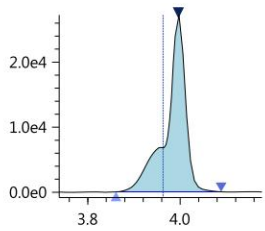
Conc 0.4706
RT 3.996 Area 76942
Q 299.00>80.00 (-) 2.73e4



PFBS-13C
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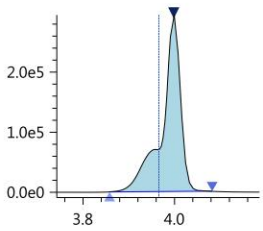
RT 3.998 Area 812330
Q 301.80>80.00 (-) 2.95e5



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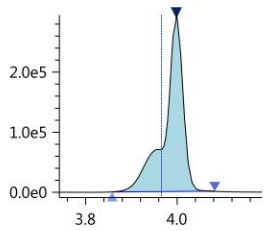
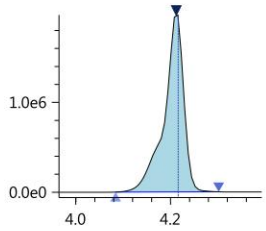
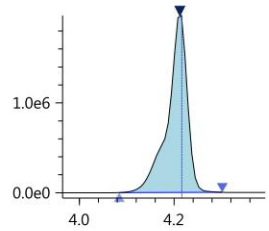


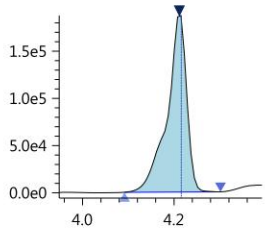
PFHxA-13C_IS
Conc 5.0000
RT 4.212 Area 5639607
ISTD 314.90>270.10 (-) 1.97e6



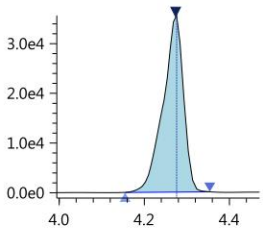
PFHxA-13C
Conc 4.6991
RT 4.212 Area 5639607
Q 314.90>270.10 (-) 1.97e6



PFHxA
Conc 0.4744
RT 4.212 Area 554131
Q 313.00>269.00 (-) 1.88e5



HPFO_DA
Conc 0.4491
RT 4.274 Area 118303
Q 329.00>169.00 (-) 3.57e4



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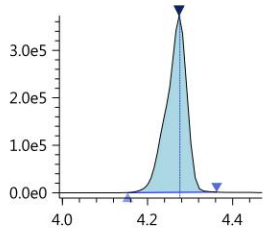
Conc 5.0000
RT 4.274 Area 1227446
ISTD 332.00>286.80 (-) 3.73e5



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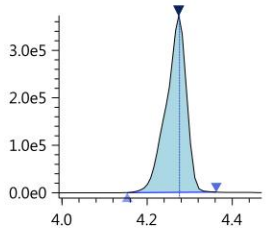
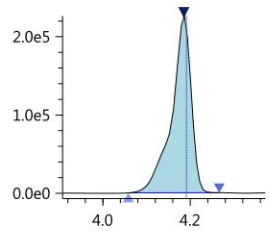
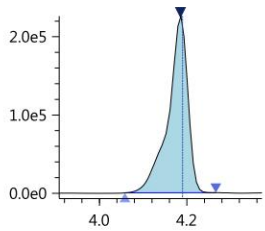
RT 4.274 Area 1227446
Q 332.00>286.80 (-) 3.73e5



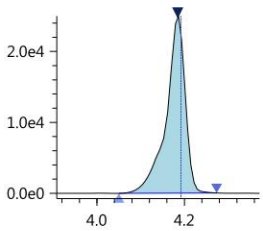
4_2-FTS-13C_IS
Conc 5.0000
RT 4.185 Area 696314
ISTD 328.80>309.05 (-) 2.26e5



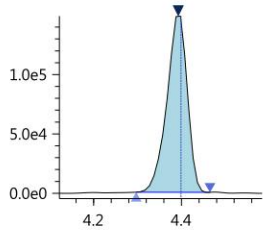
4_2-FTS-13C
Conc 4.4439
RT 4.185 Area 696314
Q 328.80>309.05 (-) 2.26e5



4_2-FTS_1
Conc 0.4707
RT 4.185 Area 74857
Q 327.00>307.05 (-) 2.50e4



PFHpA
Conc 0.5015
RT 4.393 Area 484513
Q 362.90>319.00 (-) 1.49e5



PFHpA-13C_IS
Conc 5.0000
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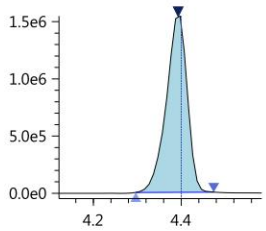
ISTD 366.90>322.10 (-) 1.55e6



PFHpA-13C

Conc 4.1565
RT 4.393 Area 5130604
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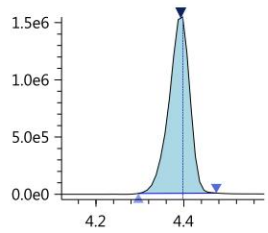

PFHxS-18O_IS

Conc 5.0000
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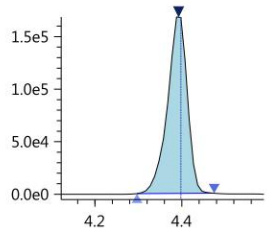
ISTD 402.70>84.05 (-) 1.69e5



PFHxS-18O

Conc 4.4223
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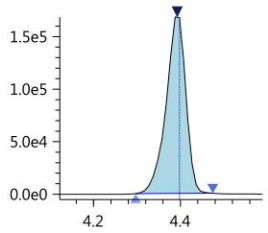
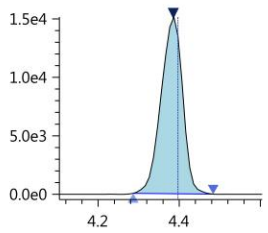
Q 402.70>84.05 (-) 1.69e5



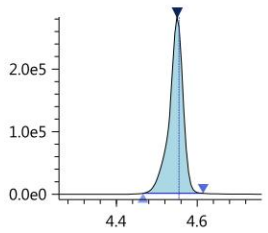
PFHxS_1

Conc 0.5046
RT 4.385 Area 56087
Q 399.00>80.00 (-) 1.52e4



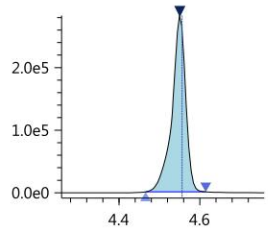
6_2-FTS-13C

Conc 4.7734
RT 4.550 Area 661683
Q 428.90>409.00 (-) 2.83e5



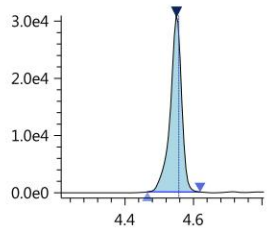
6_2-FTS-13C_IS

Conc 5.0000
RT 4.550 Area 661683
ISTD 428.90>409.00 (-) 2.83e5



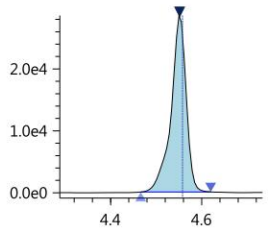
6_2-FTS_1

Conc 0.5215
RT 4.551 Area 71120
Q 427.00>407.00 (-) 3.10e4



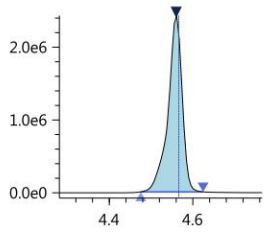
PFHpS_1

Conc 0.5003
RT 4.552 Area 65814
Q 449.00>80.15 (-) 2.86e4



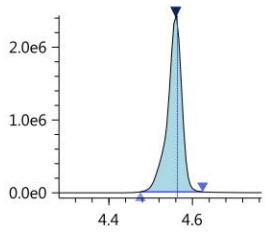
PFOA-13C_IS

Conc 5.0000
RT 4.560 Area 5684055
ISTD 416.80>372.05 (-) 2.43e6



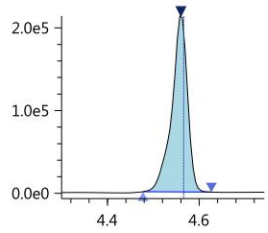
PFOA-13C

Conc 4.6199
RT 4.560 Area 5684055
Q 416.80>372.05 (-) 2.43e6



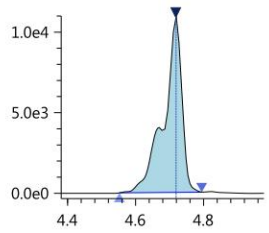
PFOA

Conc 0.4872
RT 4.560 Area 509797
Q 413.00>369.00 (-) 2.14e5



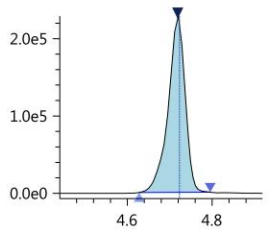
PFOS_1

Conc 0.4721
RT 4.718 Area 40106
Q 499.00>80.00 (-) 1.10e4



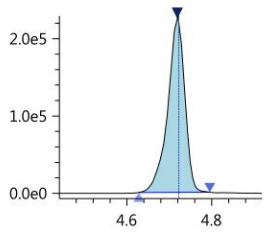
PFOS-13C_IS

Conc 5.0000
RT 4.719 Area 628880
ISTD 502.80>80.05 (-) 2.29e5



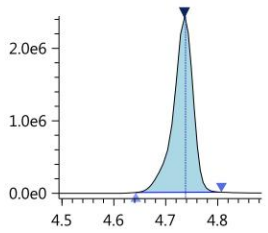
PFOS-13C

Conc 4.3818
RT 4.719 Area 628880
Q 502.80>80.05 (-) 2.29e5



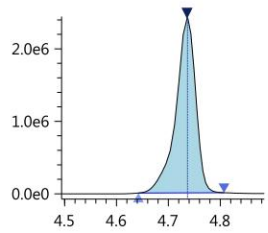
PFNA-13C_IS

Conc 5.0000
RT 4.736 Area 6393291
ISTD 467.80>423.00 (-) 2.45e6



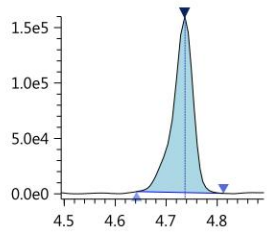
PFNA-13C

Conc 4.6330
RT 4.736 Area 6393291
Q 467.80>423.00 (-) 2.45e6



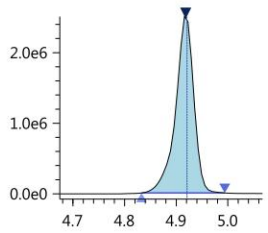
PFNA

Conc 0.4664
RT 4.736 Area 434427
Q 463.00>418.90 (-) 1.60e5



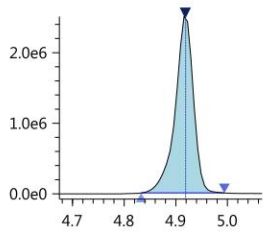
PFDA-13C_IS

Conc 5.0000
RT 4.918 Area 6146719
ISTD 514.80>469.95 (-) 2.51e6



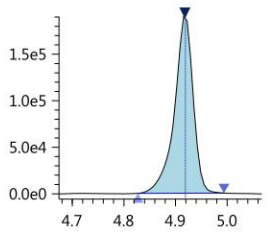
PFDA-13C

Conc 4.7219
RT 4.918 Area 6146719
Q 514.80>469.95 (-) 2.51e6

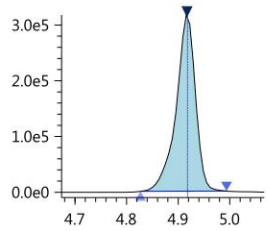


PFDA

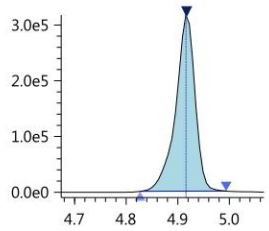
Conc 0.4807
RT 4.918 Area 482165
Q 513.00>468.80 (-) 1.90e5



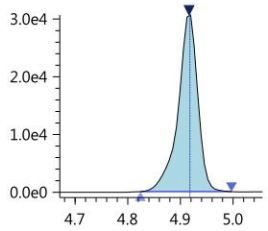
8_2-FTS-13C_IS
Conc 5.0000
RT 4.917 Area 823604
ISTD 528.80>509.00 (-) 3.18e5



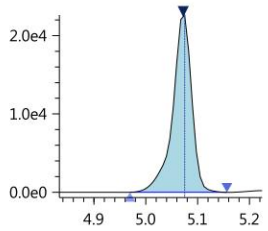
8_2-FTS-13C
Conc 5.0925
RT 4.917 Area 823604
Q 528.80>509.00 (-) 3.18e5



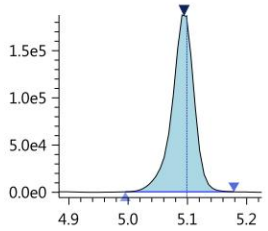
8_2-FTS_1
Conc 0.5103
RT 4.916 Area 79480
Q 527.10>506.90 (-) 3.07e4



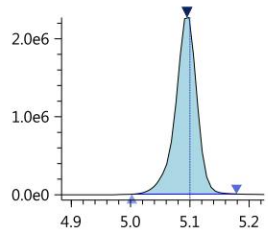
PFDS_1
Conc 0.5874
RT 5.072 Area 57631
Q 599.00>79.90 (-) 2.26e4



PFUnA
Conc 0.4559
RT 5.094 Area 490572
Q 563.00>518.90 (-) 1.88e5



PFUnA-13C_IS
Conc 5.0000
RT 5.095 Area 5777314
ISTD 564.80>519.95 (-) 2.27e6



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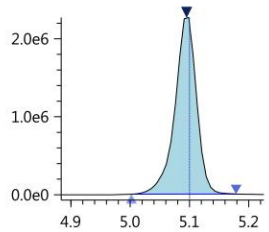
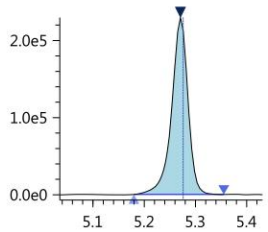
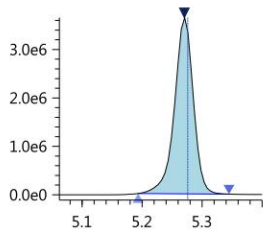
RT 5.095 Area 5777314
Q 564.80>519.95 (-) 2.27e6



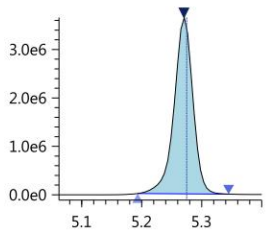
PFDoA
Conc 0.5125
RT 5.271 Area 508641
Q 613.05>569.00 (-) 2.30e5



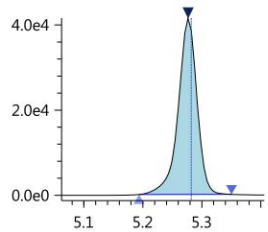
PFDoA-13C
Conc 4.6540
RT 5.270 Area 7940279
Q 614.80>569.95 (-) 3.66e6



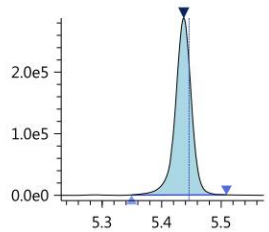
PFDoA-13C_IS
Conc 5.0000
RT 5.270 Area 7940279
ISTD 614.80>569.95 (-) 3.66e6



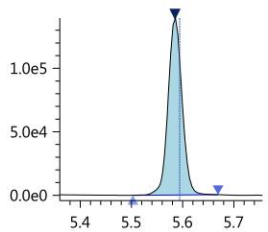
10_2-FtS_1
Conc 0.4834
RT 5.277 Area 91573
Q 627.00>606.95 (-) 4.16e4



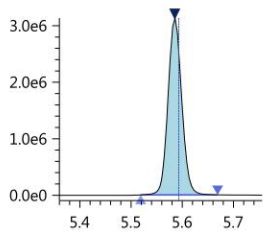
PFTrDA
Conc 0.4887
RT 5.437 Area 542594
Q 663.00>618.90 (-) 2.88e5



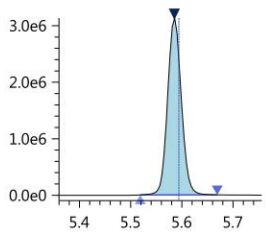
PFTeDA
Conc 0.3953
RT 5.585 Area 264639
Q 713.40>669.00 (-) 1.40e5



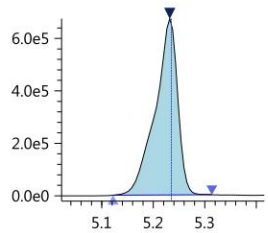
PFTeDA-13C
Conc 4.6089
RT 5.585 Area 5822092
Q 714.70>669.90 (-) 3.14e6



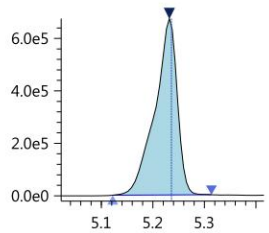
PFTeDA-13C_IS
Conc 5.0000
RT 5.585 Area 5822092
ISTD 714.70>669.90 (-) 3.14e6



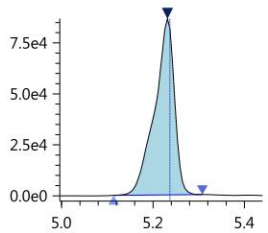
FOSA-13C_IS
Conc 5.0000
RT 5.232 Area 2018686
ISTD 506.00>78.05 (-) 6.76e5



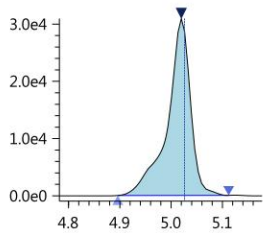
FOSA-13C
Conc 4.6067
RT 5.232 Area 2018686
Q 506.00>78.05 (-) 6.76e5



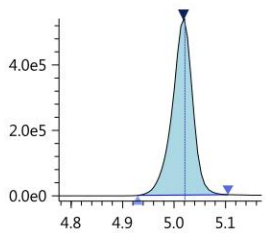
FOSA
Conc 0.4891
RT 5.232 Area 259535
Q 498.20>78.00 (-) 8.69e4



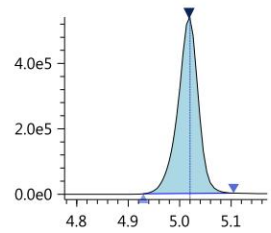
N-MeFOSAA
Conc 0.5258
RT 5.020 Area 95938
Q 570.20>419.00 (-) 3.10e4



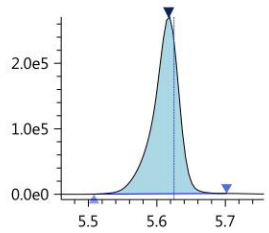
N-MeFOSAA-d3
Conc 4.6700
RT 5.018 Area 1493356
Q 572.80>419.05 (-) 5.42e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.018 Area 1493356
ISTD 572.80>419.05 (-) 5.42e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 693371
ISTD 514.90>168.90 (-) 2.71e5



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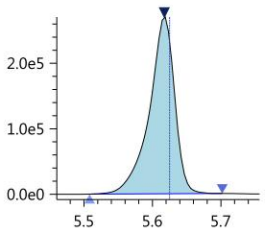
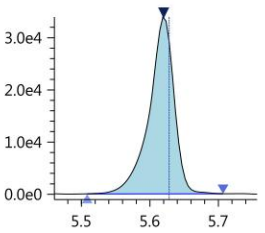
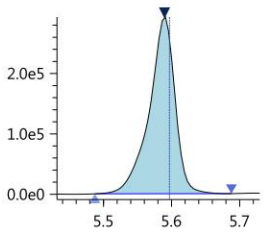
Conc 4.3542
RT 5.617 Area 693371
Q 514.90>168.90 (-) 2.71e5



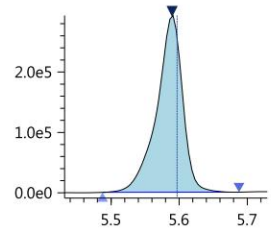
N-MeFOSA
Conc 0.5224
RT 5.620 Area 85813
Q 512.00>169.10 (-) 3.40e4



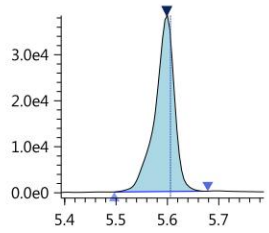
N-MeFOSE-d7
Conc 4.5712
RT 5.590 Area 769786
Q 622.70>59.10 (-) 2.94e5



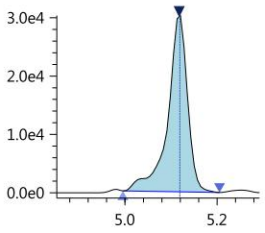
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.590 Area 769786
ISTD 622.70>59.10 (-) 2.94e5



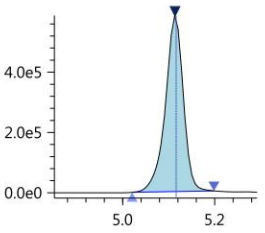
N-MeFOSE
Conc 0.5027
RT 5.599 Area 99955
Q 616.00>59.00 (-) 3.85e4



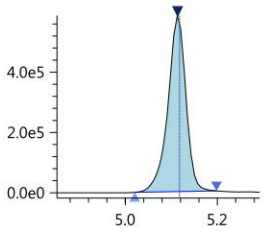
N-EtFOSAA
Conc 0.4805
RT 5.118 Area 90316
Q 584.20>418.95 (-) 3.04e4



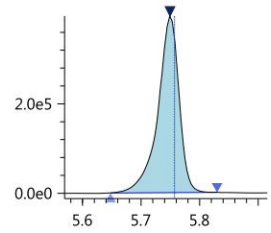
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.114 Area 1582552
ISTD 588.80>419.00 (-) 5.88e5



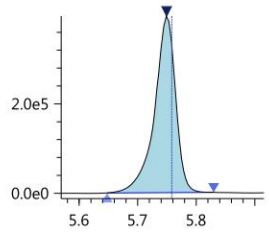
N-EtFOSAA-d5
Conc 4.9607
RT 5.114 Area 1582552
Q 588.80>419.00 (-) 5.88e5



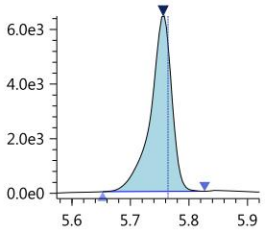
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.750 Area 987479
ISTD 530.90>169.15 (-) 3.96e5



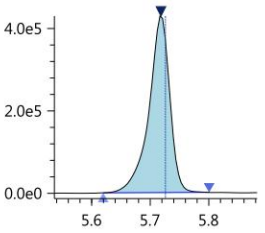
N-EtFOSA-d9
Conc 4.4785
RT 5.750 Area 987479
Q 530.90>169.15 (-) 3.96e5



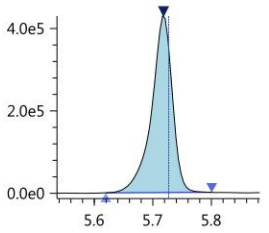
N-EtFOSA
Conc 0.5007
RT 5.756 Area 16268
Q 526.90>169.10 (-) 6.49e3



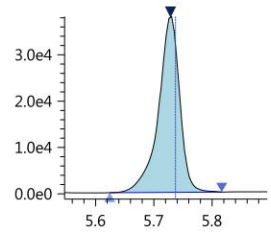
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.718 Area 1063547
ISTD 638.70>59.10 (-) 4.30e5



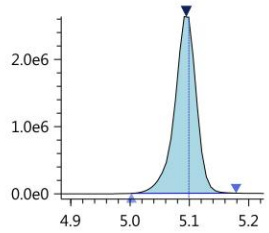
N-EtFOSE-d9
Conc 4.5757
RT 5.718 Area 1063547
Q 638.70>59.10 (-) 4.30e5



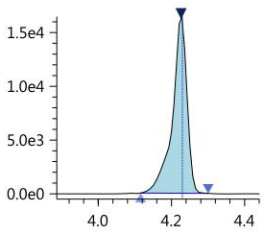
N-EtFOSE
Conc 0.4793
RT 5.729 Area 96050
Q 630.00>58.90 (-) 3.83e4



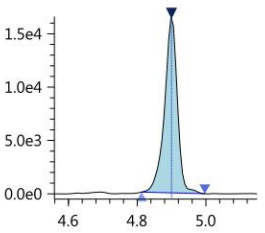
13C7-PFUnDA_IS
Conc 5.0000
RT 5.095 Area 6741850
ISTD 570.00>525.00 (-) 2.64e6



PFPeS
Conc 0.4355
RT 4.226 Area 45406
Q 349.00>99.00 (-) 1.65e4



PFNS
Conc 0.4910
RT 4.900 Area 42821
Q 549.00>99.00 (-) 1.66e4



190301_011

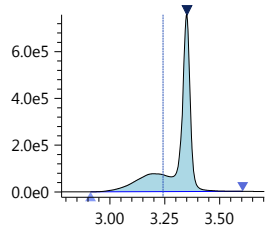
Sample ID: 1.0 PPB ICAL
Date acquired: 3/1/2019 5:09:07 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_011.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.351	2767651	2767651	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.351	2767651	6184497	26	5.0253	ng/mL	5.0000
PFBA	Auto	3.350	542713	2767651	2	1.0353	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.949	1788447	1788447	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.949	1788447	6184497	26	5.0095	ng/mL	5.0000
PFPeA	Auto	3.950	984443	1788447	4	1.0744	ng/mL	1.0000
PFBS_1	Auto	4.001	138977	758225	16	0.8541	ng/mL	0.8874
PFBS-13C	Auto	4.002	758225	6184497	26	4.7000	ng/mL	5.0000
PFBS-13C_IS	Auto	4.002	758225	758225	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.217	5318912	5318912	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.217	5318912	6184497	26	4.8313	ng/mL	5.0000
PFHxA	Auto	4.217	1040654	5318912	6	1.0618	ng/mL	1.0000
HPFO_DA	Auto	4.279	272692	1210418	3	1.0498	ng/mL	1.0000
HFPO_DA-13C_IS	Auto	4.278	1210418	1210418	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.278	1210418	6184497	26	5.0633	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.190	730852	730852	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.190	730852	6184497	26	5.0846	ng/mL	5.0000
4_2-FTS_1	Auto	4.190	152320	730852	5	0.9014	ng/mL	0.9372
PFHpA	Auto	4.400	1148151	6444590	8	1.0937	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.400	6444590	6444590	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.400	6444590	6184497	26	5.6915	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.399	570143	570143	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.399	570143	6184497	26	5.1378	ng/mL	5.0000
PFHxS_1	Auto	4.398	106499	570143	7	0.8583	ng/mL	0.9131
6_2-FTS-13C	Auto	4.557	673495	6184497	26	5.2965	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.557	673495	673495	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.557	136857	811176	15	0.9302	ng/mL	0.9512
PFHpS_1	Auto	4.557	127769	570143	7	0.9114	ng/mL	0.9534
PFOA-13C_IS	Auto	4.566	5873977	5873977	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.566	5873977	6184497	26	5.2045	ng/mL	5.0000
PFOA	Auto	4.566	1021149	5873977	9	1.0296	ng/mL	1.0000
PFOS_1	Auto	4.721	87417	686975	13	0.9340	ng/mL	0.9292
PFOS-13C_IS	Auto	4.722	686975	686975	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.722	686975	6184497	26	5.2179	ng/mL	5.0000
PFNA-13C_IS	Auto	4.737	6744577	6744577	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.737	6744577	6184497	26	5.3281	ng/mL	5.0000
PFNA	Auto	4.737	973803	6744577	11	1.0429	ng/mL	1.0000
PFDA-13C_IS	Auto	4.920	6290167	6290167	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.920	6290167	6184497	26	5.2675	ng/mL	5.0000
PFDA	Auto	4.920	984163	6290167	12	0.9588	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.918	811176	811176	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.918	811176	6184497	26	5.4677	ng/mL	5.0000
8_2-FTS_1	Auto	4.917	146712	811176	15	0.9457	ng/mL	0.9600
PFDS_1	Auto	5.076	108423	686975	13	0.9524	ng/mL	0.9647
PFUnA	Auto	5.099	906226	5379594	14	1.0516	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.099	5379594	5379594	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.099	5379594	6184497	26	5.0068	ng/mL	5.0000
PFDoA	Auto	5.275	1029929	8159855	17	1.0452	ng/mL	1.0000
PFDoA-13C	Auto	5.275	8159855	6184497	26	5.2137	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.275	8159855	8159855	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.281	177674	811176	15	0.9522	ng/mL	0.9662
PFTrDA	Auto	5.446	1083541	6069134	22	0.9869	ng/mL	1.0000
PFTeDA	Auto	5.593	484786	6069134	22	1.0170	ng/mL	1.0000
PFTeDA-13C	Auto	5.593	6069134	6184497	26	5.2374	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.593	6069134	6069134	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.236	1999590	1999590	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.236	1999590	6184497	26	4.9744	ng/mL	5.0000
FOSA	Auto	5.236	509515	1999590	18	0.9693	ng/mL	1.0000
N-MeFOSAA	Auto	5.025	183112	1525691	19	0.9733	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.022	1525691	6184497	26	5.2011	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.022	1525691	1525691	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.625	741750	741750	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.625	741750	6184497	26	5.0778	ng/mL	5.0000
N-MeFOSA	Auto	5.628	164553	741750	1	0.9363	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.598	784140	6184497	26	5.0761	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.598	784140	784140	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.607	195387	784140	20	0.9647	ng/mL	1.0000

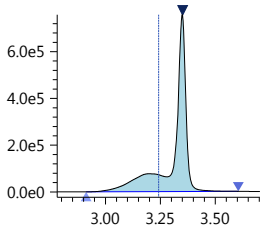
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.122	180113	1556456	21	0.9898	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.117	1556456	1556456	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.117	1556456	6184497	26	5.3186	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.758	1034598	1034598	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.758	1034598	6184497	26	5.1150	ng/mL	5.0000
N-EtFOSA	Auto	5.763	32270	1034598	23	0.9358	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.726	1064572	1064572	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.726	1064572	6184497	26	4.9928	ng/mL	5.0000
N-EtFOSE	Auto	5.737	190449	1064572	24	0.9548	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.099	6184497	6184497	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.231	92529	758225	16	0.9424	ng/mL	0.9409
PFNS	Auto	4.901	83850	686975	13	0.8719	ng/mL	0.9616

PFBA-13C_IS
Conc 5.0000
RT 3.351 Area 2767651
ISTD 216.90>172.15 (-) 7.58e5



PFBA-13C
Conc 5.0253
RT 3.351 Area 2767651
Q 216.90>172.15 (-) 7.58e5



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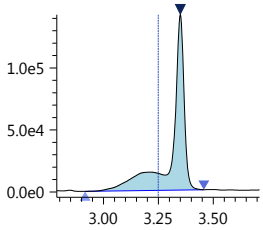
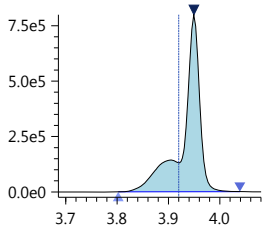
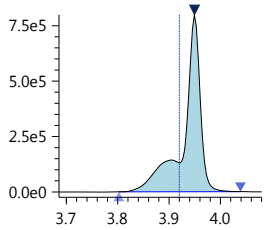
Conc 1.0353
RT 3.350 Area 542713
Q 213.00>169.10 (-) 1.43e5



PFPeA-13C_IS
Conc 5.0000
RT 3.949 Area 1788447
ISTD 267.90>223.00 (-) 7.99e5



PFPeA-13C
Conc 5.0095
RT 3.949 Area 1788447
Q 267.90>223.00 (-) 7.99e5



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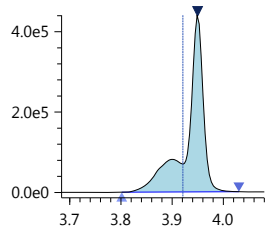
Conc 1.0744
RT 3.950 Area 984443
Q 263.05>219.10 (-) 4.41e5



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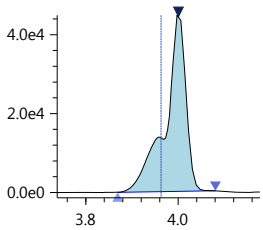
Conc 0.8541
RT 4.001 Area 138977
Q 299.00>80.00 (-) 4.49e4



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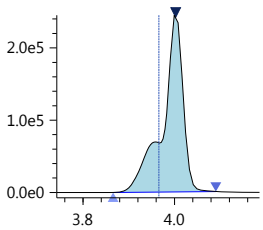
Conc 4.7000
RT 4.002 Area 758225
Q 301.80>80.00 (-) 2.45e5



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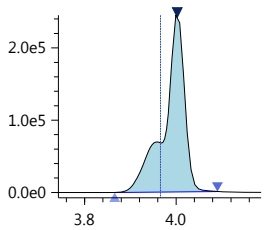
Conc 5.0000
RT 4.002 Area 758225
ISTD 301.80>80.00 (-) 2.45e5



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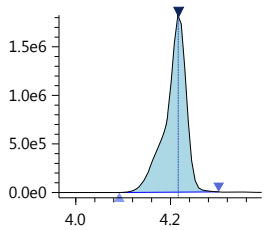
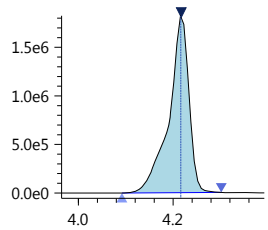
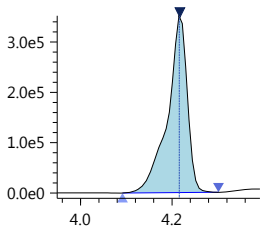
Conc 5.0000
RT 4.217 Area 5318912
ISTD 314.90>270.10 (-) 1.83e6



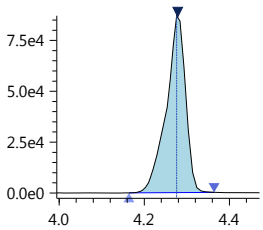
PFHxA-13C
Conc 4.8313
RT 4.217 Area 5318912
Q 314.90>270.10 (-) 1.83e6



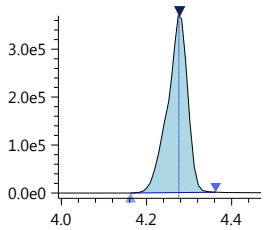
PFHxA
Conc 1.0618
RT 4.217 Area 1040654
Q 313.00>269.00 (-) 3.52e5



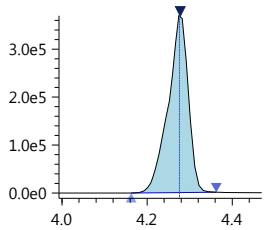
HPFO_DA
Conc 1.0498
RT 4.279 Area 272692
Q 329.00>169.00 (-) 8.71e4



HFPO_DA-13C_IS
Conc 5.0000
RT 4.278 Area 1210418
ISTD 332.00>286.80 (-) 3.70e5



HFPO_DA-13C
Conc 5.0633
RT 4.278 Area 1210418
Q 332.00>286.80 (-) 3.70e5

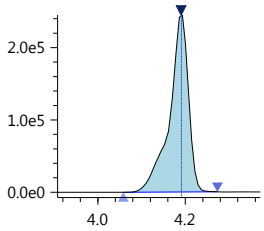


4_2-FTS-13C_IS

Conc 5.0000

RT 4.190 Area 730852

ISTD 328.80>309.05 (-) 2.45e5

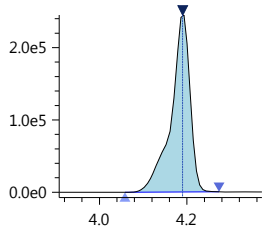


4_2-FTS-13C

Conc 5.0846

RT 4.190 Area 730852

Q 328.80>309.05 (-) 2.45e5

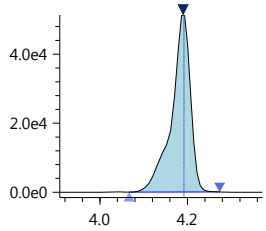


4_2-FTS_1

Conc 0.9014

RT 4.190 Area 152320

Q 327.00>307.05 (-) 5.14e4

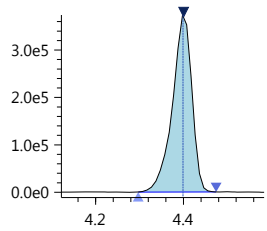


PFHpA

Conc 1.0937

RT 4.400 Area 1148151

Q 362.90>319.00 (-) 3.74e5

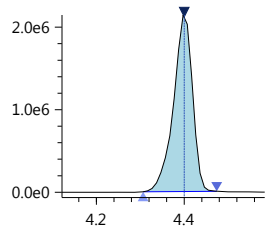


PFHpA-13C_IS

Conc 5.0000

RT 4.400 Area 6444590

ISTD 366.90>322.10 (-) 2.15e6

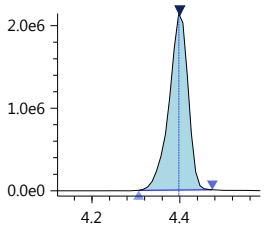


PFHpA-13C

Conc 5.6915

RT 4.400 Area 6444590

Q 366.90>322.10 (-) 2.15e6

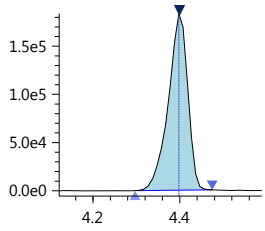


PFHxS-18O_IS

Conc 5.0000

RT 4.399 Area 570143

ISTD 402.70>84.05 (-) 1.84e5

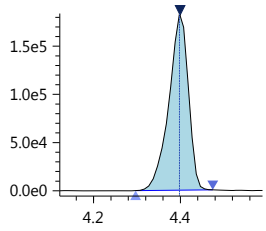


PFHxS-18O

Conc 5.1378

RT 4.399 Area 570143

Q 402.70>84.05 (-) 1.84e5

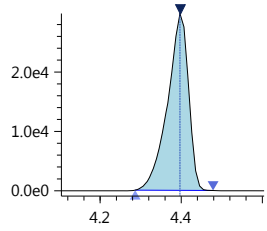


PFHxS_1

Conc 0.8583

RT 4.398 Area 106499

Q 399.00>80.00 (-) 2.99e4

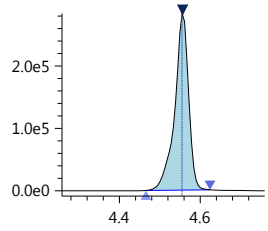


6_2-FTS-13C

Conc 5.2965

RT 4.557 Area 673495

Q 428.90>409.00 (-) 2.84e5

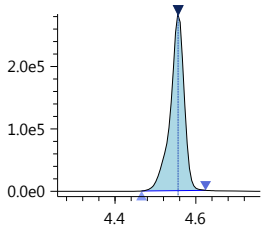


6_2-FTS-13C_IS

Conc 5.0000

RT 4.557 Area 673495

ISTD 428.90>409.00 (-) 2.84e5

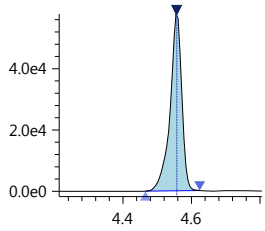


6_2-FTS_1

Conc 0.9302

RT 4.557 Area 136857

Q 427.00>407.00 (-) 5.79e4

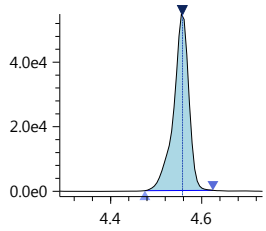


PFHpS_1

Conc 0.9114

RT 4.557 Area 127769

Q 449.00>80.15 (-) 5.49e4

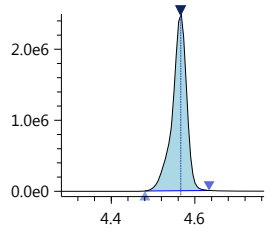


PFOA-13C_IS

Conc 5.0000

RT 4.566 Area 5873977

ISTD 416.80>372.05 (-) 2.50e6

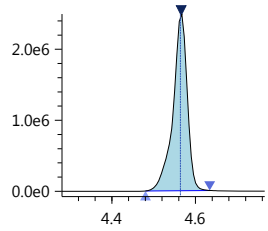


PFOA-13C

Conc 5.2045

RT 4.566 Area 5873977

Q 416.80>372.05 (-) 2.50e6

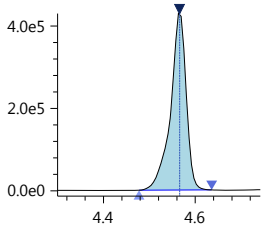


PFOA

Conc 1.0296

RT 4.566 Area 1021149

Q 413.00>369.00 (-) 4.30e5

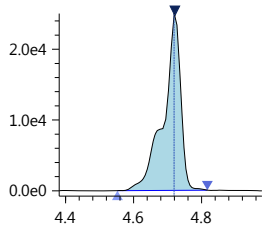


PFOS_1

Conc 0.9340

RT 4.721 Area 87417

Q 499.00>80.00 (-) 2.50e4

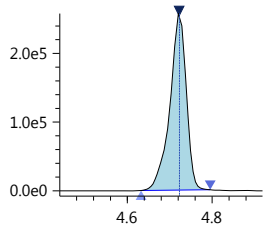


PFOS-13C_IS

Conc 5.0000

RT 4.722 Area 686975

ISTD 502.80>80.05 (-) 2.58e5

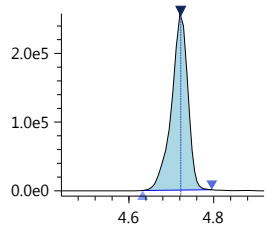


PFOS-13C

Conc 5.2179

RT 4.722 Area 686975

Q 502.80>80.05 (-) 2.58e5

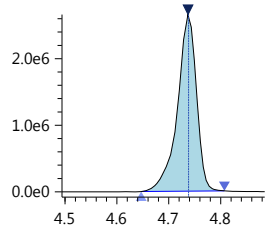


PFNA-13C_IS

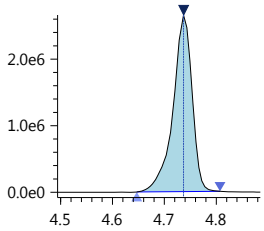
Conc 5.0000

RT 4.737 Area 6744577

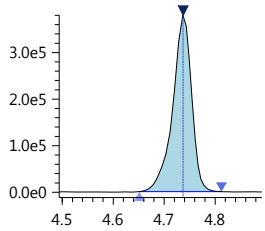
ISTD 467.80>423.00 (-) 2.66e6



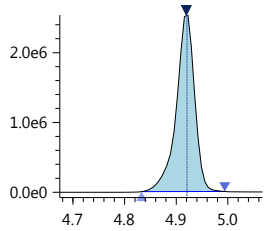
PFNA-13C
Conc 5.3281
RT 4.737 Area 6744577
Q 467.80>423.00 (-) 2.66e6



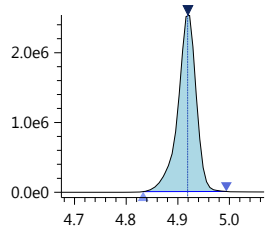
PFNA
Conc 1.0429
RT 4.737 Area 973803
Q 463.00>418.90 (-) 3.81e5



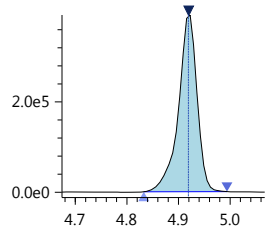
PFDA-13C_IS
Conc 5.0000
RT 4.920 Area 6290167
ISTD 514.80>469.95 (-) 2.54e6



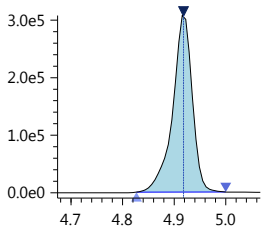
PFDA-13C
Conc 5.2675
RT 4.920 Area 6290167
Q 514.80>469.95 (-) 2.54e6



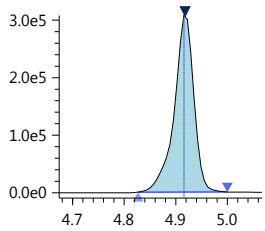
PFDA
Conc 0.9588
RT 4.920 Area 984163
Q 513.00>468.80 (-) 3.93e5



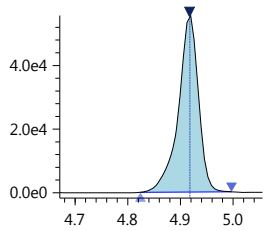
8_2-FTS-13C_IS
Conc 5.0000
RT 4.918 Area 811176
ISTD 528.80>509.00 (-) 3.08e5



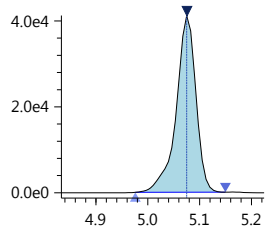
8_2-FTS-13C
Conc 5.4677
RT 4.918 Area 811176
Q 528.80>509.00 (-) 3.08e5



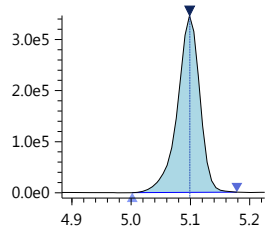
8_2-FTS_1
Conc 0.9457
RT 4.917 Area 146712
Q 527.10>506.90 (-) 5.57e4



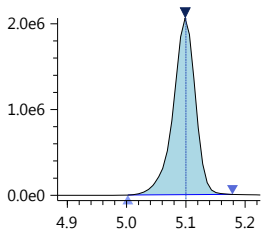
PFDS_1
Conc 0.9524
RT 5.076 Area 108423
Q 599.00>79.90 (-) 4.13e4



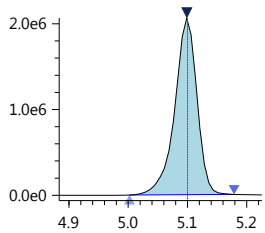
PFUnA
Conc 1.0516
RT 5.099 Area 906226
Q 563.00>518.90 (-) 3.47e5



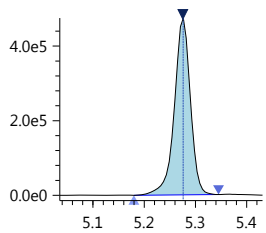
PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5379594
ISTD 564.80>519.95 (-) 2.07e6



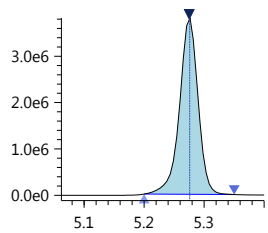
PFUnA-13C
Conc 5.0068
RT 5.099 Area 5379594
Q 564.80>519.95 (-) 2.07e6



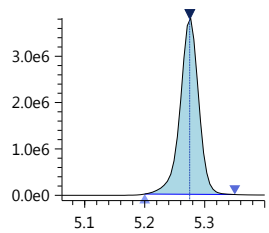
PFDoA
Conc 1.0452
RT 5.275 Area 1029929
Q 613.05>569.00 (-) 4.75e5



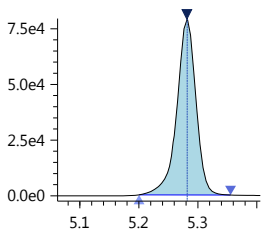
PFDoA-13C
Conc 5.2137
RT 5.275 Area 8159855
Q 614.80>569.95 (-) 3.82e6



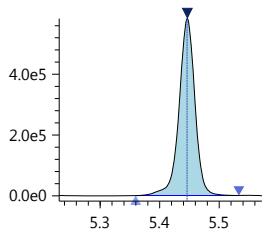
PFDoA-13C_IS
Conc 5.0000
RT 5.275 Area 8159855
ISTD 614.80>569.95 (-) 3.82e6



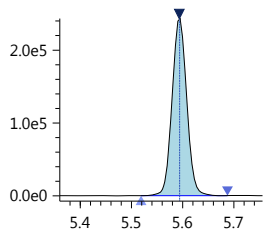
10_2-FtS_1
Conc 0.9522
RT 5.281 Area 177674
Q 627.00>606.95 (-) 7.96e4



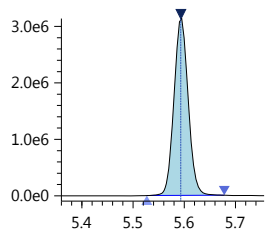
PFTrDA
Conc 0.9869
RT 5.446 Area 1083541
Q 663.00>618.90 (-) 5.83e5



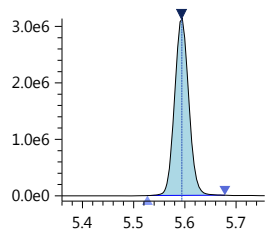
PFTeDA
Conc 1.0170
RT 5.593 Area 484786
Q 713.40>669.00 (-) 2.43e5



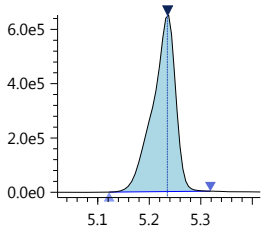
PFTeDA-13C
Conc 5.2374
RT 5.593 Area 6069134
Q 714.70>669.90 (-) 3.14e6



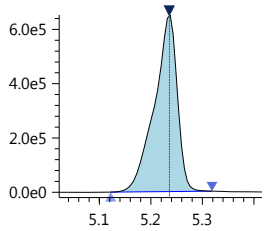
PFTeDA-13C_IS
Conc 5.0000
RT 5.593 Area 6069134
ISTD 714.70>669.90 (-) 3.14e6



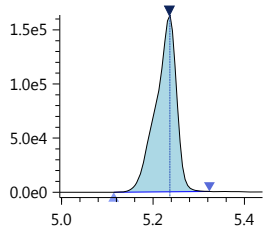
FOSA-13C_IS
Conc 5.0000
RT 5.236 Area 1999590
ISTD 506.00>78.05 (-) 6.53e5



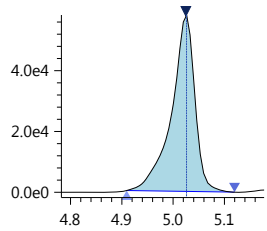
FOSA-13C
Conc 4.9744
RT 5.236 Area 1999590
Q 506.00>78.05 (-) 6.53e5



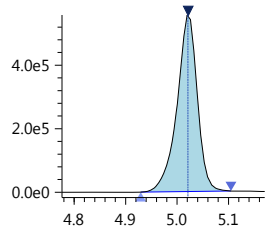
FOSA
Conc 0.9693
RT 5.236 Area 509515
Q 498.20>78.00 (-) 1.64e5



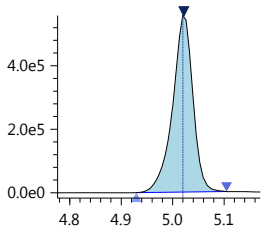
N-MeFOSAA
Conc 0.9733
RT 5.025 Area 183112
Q 570.20>419.00 (-) 5.83e4



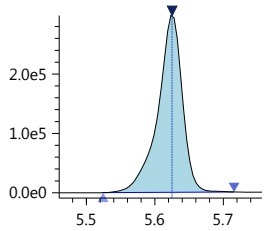
N-MeFOSAA-d3
Conc 5.2011
RT 5.022 Area 1525691
Q 572.80>419.05 (-) 5.58e5



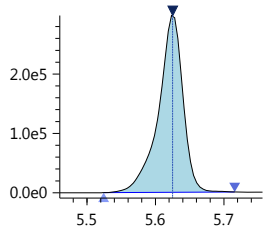
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.022 Area 1525691
ISTD 572.80>419.05 (-) 5.58e5



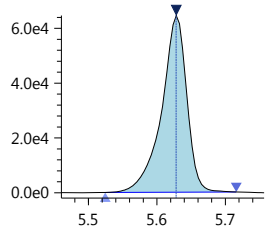
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.625 Area 741750
ISTD 514.90>168.90 (-) 2.99e5



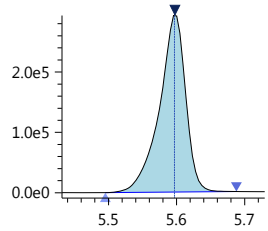
N-MeFOSA-d3
Conc 5.0778
RT 5.625 Area 741750
Q 514.90>168.90 (-) 2.99e5



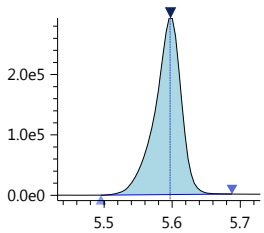
N-MeFOSA
Conc 0.9363
RT 5.628 Area 164553
Q 512.00>169.10 (-) 6.47e4



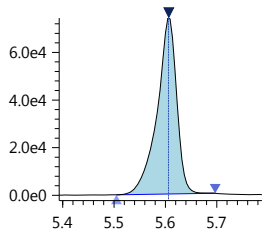
N-MeFOSE-d7
Conc 5.0761
RT 5.598 Area 784140
Q 622.70>59.10 (-) 2.94e5



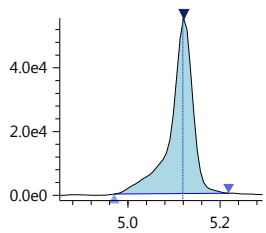
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.598 Area 784140
ISTD 622.70>59.10 (-) 2.94e5



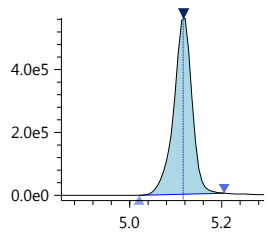
N-MeFOSE
Conc 0.9647
RT 5.607 Area 195387
Q 616.00>59.00 (-) 7.44e4



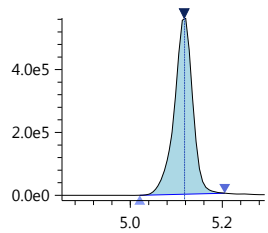
N-EtFOSAA
Conc 0.9898
RT 5.122 Area 180113
Q 584.20>418.95 (-) 5.56e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1556456
ISTD 588.80>419.00 (-) 5.64e5



N-EtFOSAA-d5
Conc 5.3186
RT 5.117 Area 1556456
Q 588.80>419.00 (-) 5.64e5



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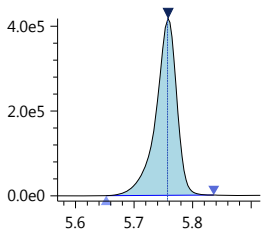
Conc 5.0000
RT 5.758 Area 1034598
ISTD 530.90>169.15 (-) 4.18e5



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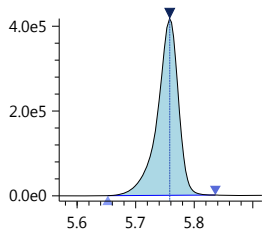
Conc 5.1150
RT 5.758 Area 1034598
Q 530.90>169.15 (-) 4.18e5



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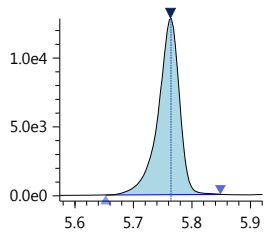
RT 5.763 Area 32270
Q 526.90>169.10 (-) 1.29e4



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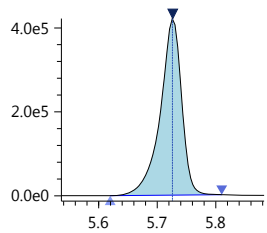
Conc 5.0000
RT 5.726 Area 1064572
ISTD 638.70>59.10 (-) 4.22e5



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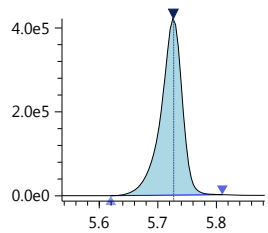
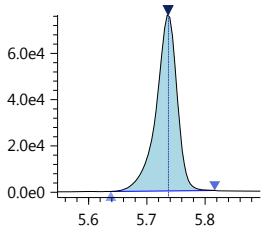
RT 5.726 Area 1064572
Q 638.70>59.10 (-) 4.22e5



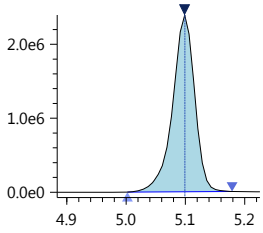
N-EtFOSE

Conc 0.9548
RT 5.737 Area 190449
Q 630.00>58.90 (-) 7.66e4



13C7-PFUnDA_IS

Conc 5.0000
RT 5.099 Area 6184497
ISTD 570.00>525.00 (-) 2.40e6



PFPeS

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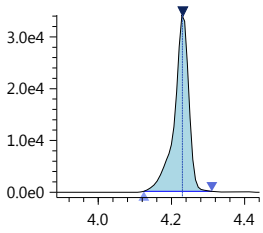
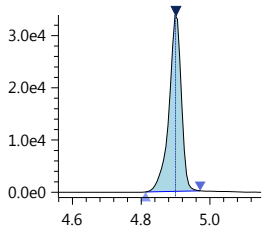
RT 4.231 Area 92529
Q 349.00>99.00 (-) 3.42e4



PFNS

Conc 0.8719
RT 4.901 Area 83850
Q 549.00>99.00 (-) 3.39e4



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Date acquired: 3/1/2019 5:09:07 PM
Acquired by: System Administrator
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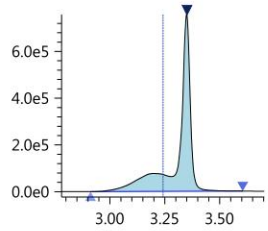
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.351 Area 2767651
ISTD 216.90>172.15 (-) 7.58e5



PFBA-13C
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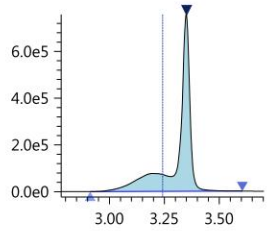
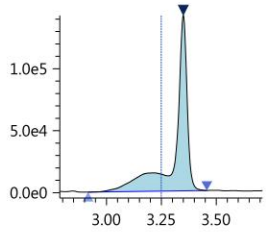
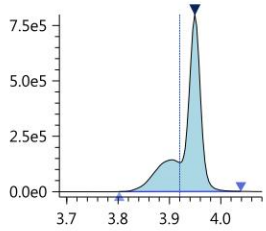
Q 216.90>172.15 (-) 7.58e5



PFBA
Conc 1.0353
RT 3.350 Area 542713
Q 213.00>169.10 (-) 1.43e5



PFPeA-13C_IS
Conc 5.0000
RT 3.949 Area 1788447
ISTD 267.90>223.00 (-) 7.99e5



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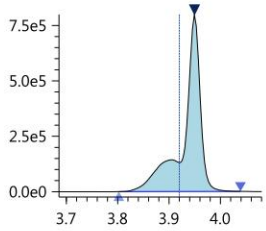

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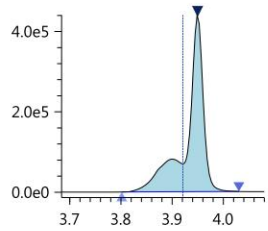
Q 263.05>219.10 (-) 4.41e5



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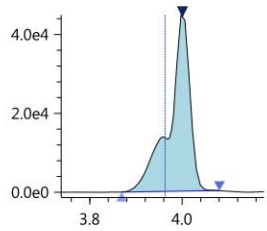
Q 299.00>80.00 (-) 4.49e4



PFBS-13C
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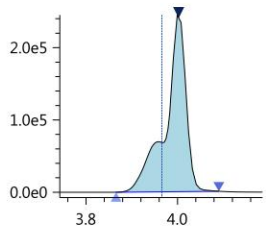
RT 4.002 Area 758225
Q 301.80>80.00 (-) 2.45e5



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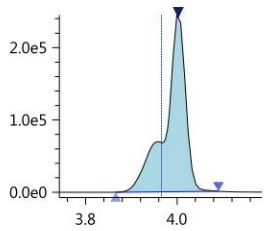
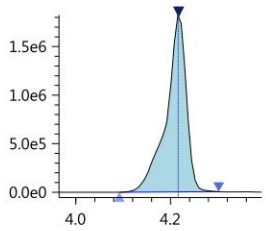


PFHxA-13C_IS
Conc 5.0000
RT 4.217 Area 5318912
ISTD 314.90>270.10 (-) 1.83e6



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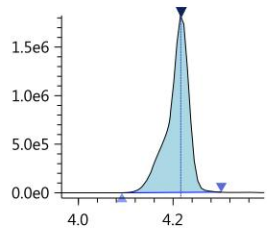
Conc 4.8313
RT 4.217 Area 5318912
Q 314.90>270.10 (-) 1.83e6



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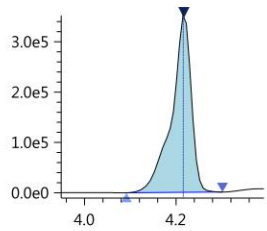
Q 313.00>269.00 (-) 3.52e5



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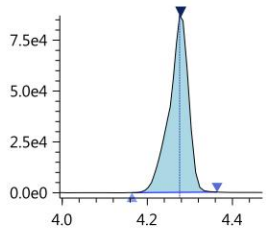
Conc 1.0498
RT 4.279 Area 272692
Q 329.00>169.00 (-) 8.71e4



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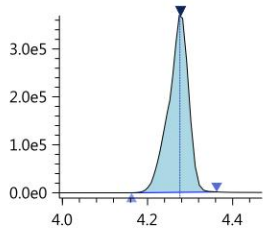
RT 4.278 Area 1210418
ISTD 332.00>286.80 (-) 3.70e5



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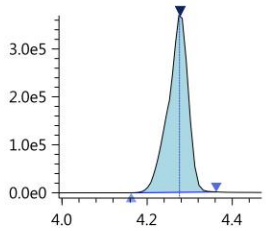
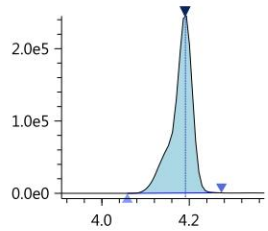


4_2-FTS-13C_IS
Conc 5.0000
RT 4.190 Area 730852
ISTD 328.80>309.05 (-) 2.45e5



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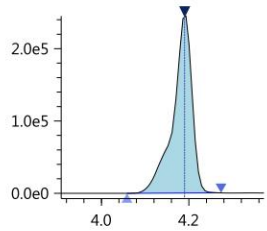
Q 328.80>309.05 (-) 2.45e5



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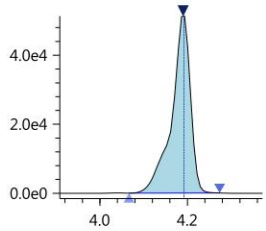
RT 4.190 Area 152320
Q 327.00>307.05 (-) 5.14e4



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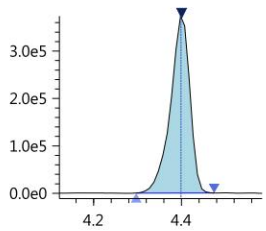
RT 4.400 Area 1148151
Q 362.90>319.00 (-) 3.74e5



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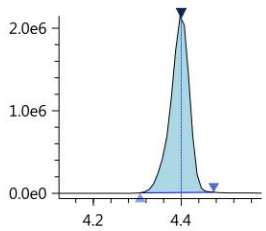
ISTD 366.90>322.10 (-) 2.15e6



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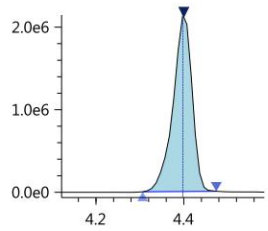

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Conc 5.0000
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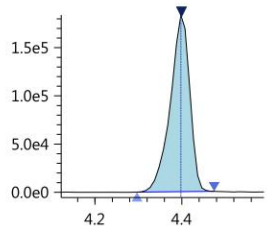
ISTD 402.70>84.05 (-) 1.84e5



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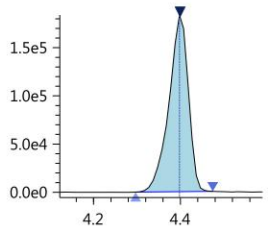

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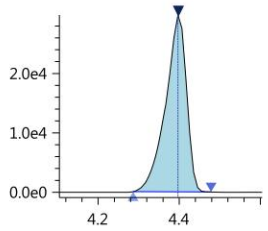
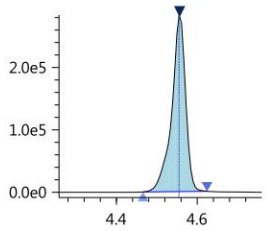
Conc 0.8990
RT 4.398 Area 106499
Q 399.00>80.00 (-) 2.99e4



6_2-FTS-13C
Conc 5.2965
RT 4.557 Area 673495
Q 428.90>409.00 (-) 2.84e5



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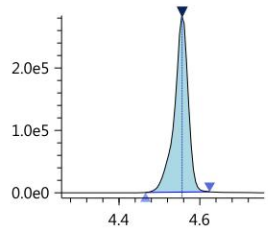
ISTD 428.90>409.00 (-) 2.84e5



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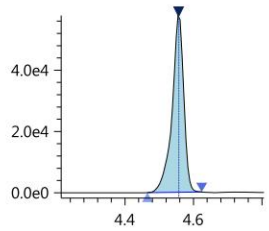
Q 427.00>407.00 (-) 5.79e4



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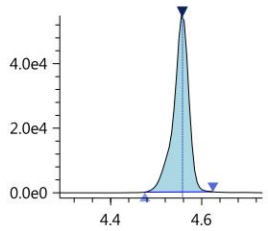

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Conc 5.0000
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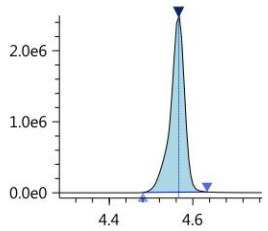
ISTD 416.80>372.05 (-) 2.50e6



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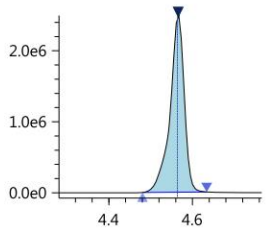
Q 416.80>372.05 (-) 2.50e6



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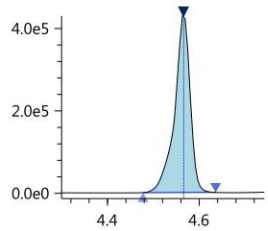
Q 413.00>369.00 (-) 4.30e5



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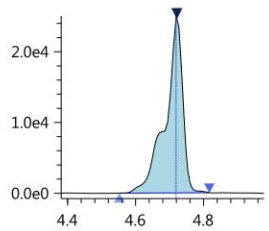
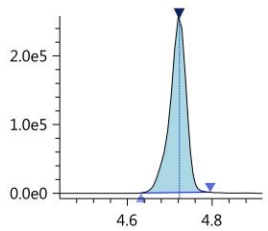
RT 4.721 Area 87417
Q 499.00>80.00 (-) 2.50e4



PFOS-13C_IS
Conc 5.0000
RT 4.722 Area 686975
ISTD 502.80>80.05 (-) 2.58e5



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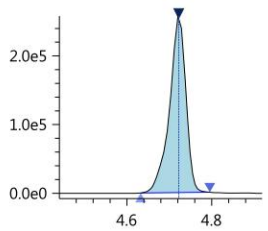
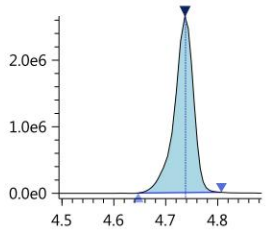
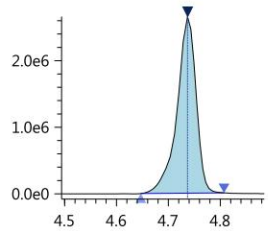
Q 502.80>80.05 (-) 2.58e5



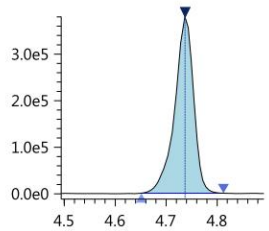
PFNA-13C_IS
Conc 5.0000
RT 4.737 Area 6744577
ISTD 467.80>423.00 (-) 2.66e6



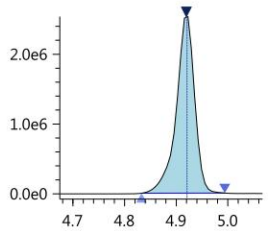
PFNA-13C
Conc 5.3281
RT 4.737 Area 6744577
Q 467.80>423.00 (-) 2.66e6



PFNA
Conc 0.9909
RT 4.737 Area 973803
Q 463.00>418.90 (-) 3.81e5



PFDA-13C_IS
Conc 5.0000
RT 4.920 Area 6290167
ISTD 514.80>469.95 (-) 2.54e6



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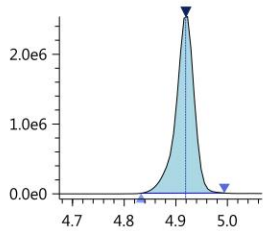
RT 4.920 Area 6290167
Q 514.80>469.95 (-) 2.54e6



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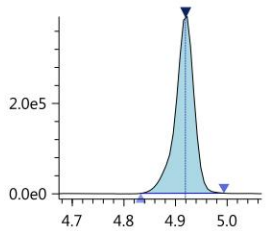
Conc 0.9588
RT 4.920 Area 984163
Q 513.00>468.80 (-) 3.93e5



8_2-FTS-13C_IS
Conc 5.0000
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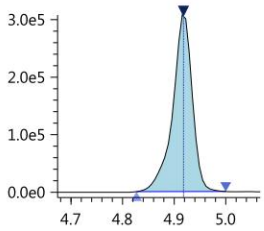
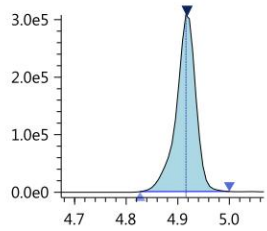
ISTD 528.80>509.00 (-) 3.08e5



8_2-FTS-13C
Conc 5.4677
RT 4.918 Area 811176
Q 528.80>509.00 (-) 3.08e5



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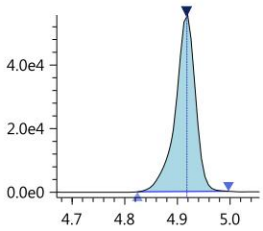
RT 4.917 Area 146712
Q 527.10>506.90 (-) 5.57e4



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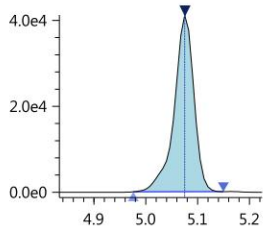
Conc 1.0116
RT 5.076 Area 108423
Q 599.00>79.90 (-) 4.13e4



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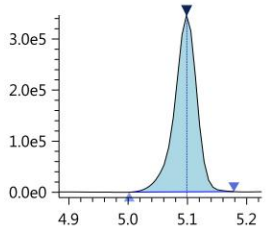
Conc 0.9044
RT 5.099 Area 906226
Q 563.00>518.90 (-) 3.47e5



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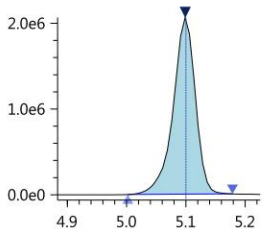
Conc 5.0000
RT 5.099 Area 5379594
ISTD 564.80>519.95 (-) 2.07e6



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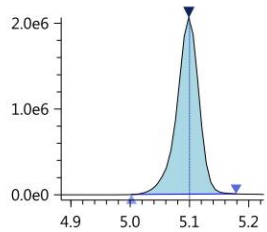
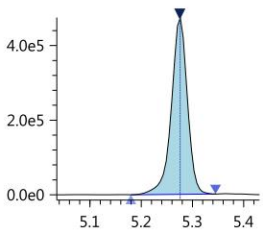
Conc 5.0068
RT 5.099 Area 5379594
Q 564.80>519.95 (-) 2.07e6



PFDoA
Conc 1.0098
RT 5.275 Area 1029929
Q 613.05>569.00 (-) 4.75e5



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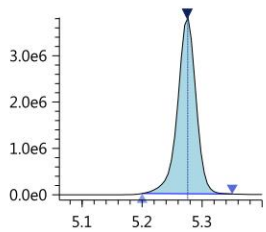
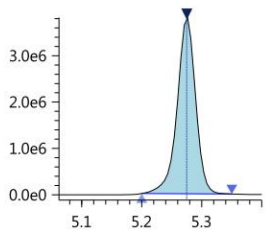
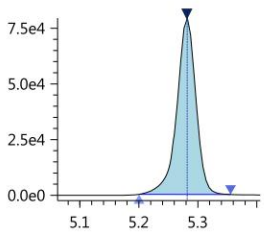
Conc 5.2137
RT 5.275 Area 8159855
Q 614.80>569.95 (-) 3.82e6



PFDoA-13C_IS
Conc 5.0000
RT 5.275 Area 8159855
ISTD 614.80>569.95 (-) 3.82e6



10_2-FtS_1
Conc 0.9522
RT 5.281 Area 177674
Q 627.00>606.95 (-) 7.96e4



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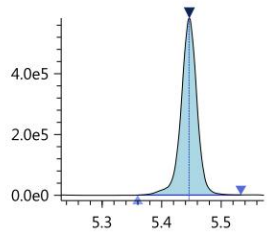
Conc 0.9361
RT 5.446 Area 1083541
Q 663.00>618.90 (-) 5.83e5



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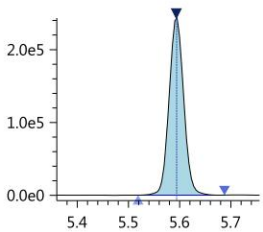
Conc 0.6946
RT 5.593 Area 484786
Q 713.40>669.00 (-) 2.43e5



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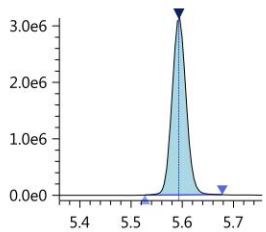
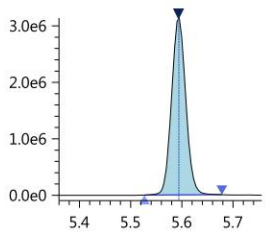
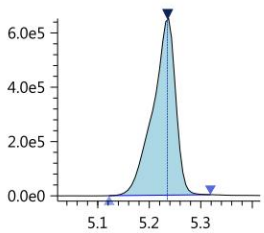
Conc 5.2374
RT 5.593 Area 6069134
Q 714.70>669.90 (-) 3.14e6



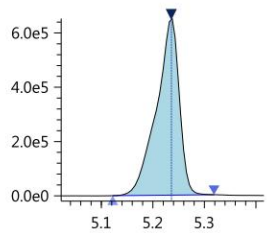
PFTeDA-13C_IS
Conc 5.0000
RT 5.593 Area 6069134
ISTD 714.70>669.90 (-) 3.14e6



FOSA-13C_IS
Conc 5.0000
RT 5.236 Area 1999590
ISTD 506.00>78.05 (-) 6.53e5



FOSA-13C
Conc 4.9744
RT 5.236 Area 1999590
Q 506.00>78.05 (-) 6.53e5



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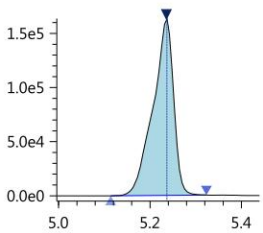
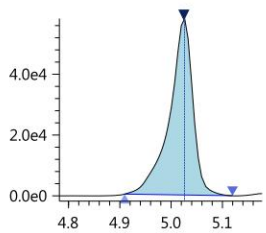
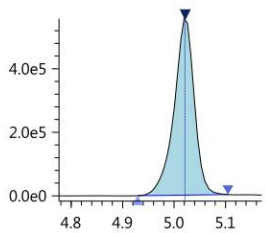
Conc 0.9693
RT 5.236 Area 509515
Q 498.20>78.00 (-) 1.64e5



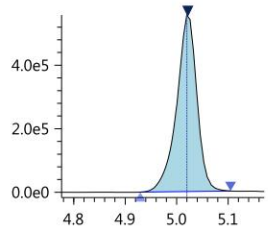
N-MeFOSAA
Conc 0.9824
RT 5.025 Area 183112
Q 570.20>419.00 (-) 5.83e4



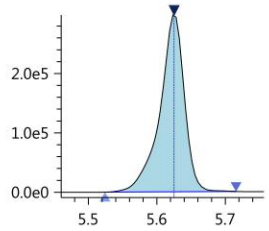
N-MeFOSAA-d3
Conc 5.2011
RT 5.022 Area 1525691
Q 572.80>419.05 (-) 5.58e5



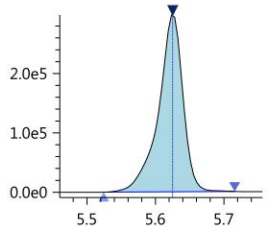
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.022 Area 1525691
ISTD 572.80>419.05 (-) 5.58e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.625 Area 741750
ISTD 514.90>168.90 (-) 2.99e5



N-MeFOSA-d3
Conc 5.0778
RT 5.625 Area 741750
Q 514.90>168.90 (-) 2.99e5



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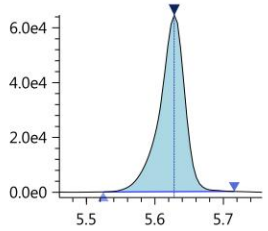
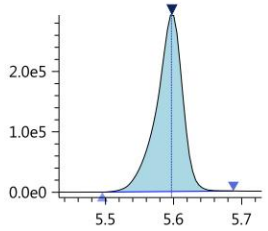
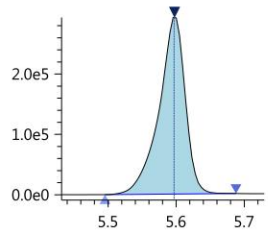
Conc 0.9363
RT 5.628 Area 164553
Q 512.00>169.10 (-) 6.47e4



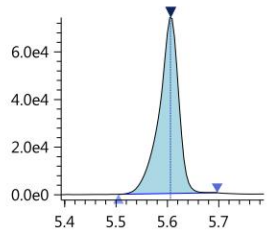
N-MeFOSE-d7
Conc 5.0761
RT 5.598 Area 784140
Q 622.70>59.10 (-) 2.94e5



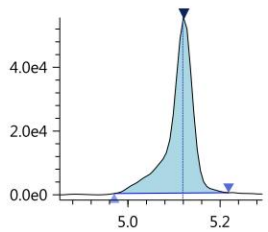
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.598 Area 784140
ISTD 622.70>59.10 (-) 2.94e5



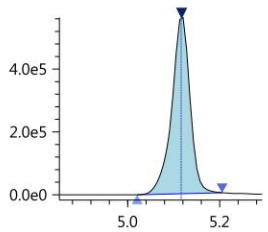
N-MeFOSE
Conc 0.9647
RT 5.607 Area 195387
Q 616.00>59.00 (-) 7.44e4



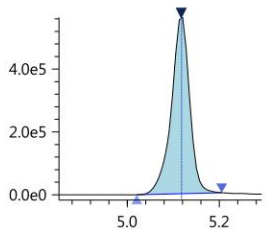
N-EtFOSAA
Conc 0.9742
RT 5.122 Area 180113
Q 584.20>418.95 (-) 5.56e4



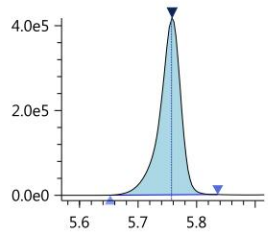
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1556456
ISTD 588.80>419.00 (-) 5.64e5



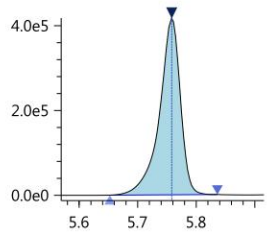
N-EtFOSAA-d5
Conc 5.3186
RT 5.117 Area 1556456
Q 588.80>419.00 (-) 5.64e5



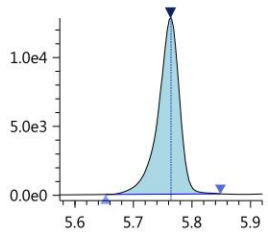
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.758 Area 1034598
ISTD 530.90>169.15 (-) 4.18e5



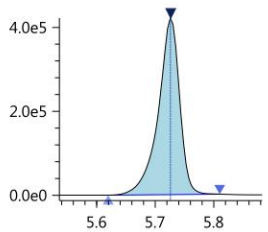
N-EtFOSA-d9
Conc 5.1150
RT 5.758 Area 1034598
Q 530.90>169.15 (-) 4.18e5



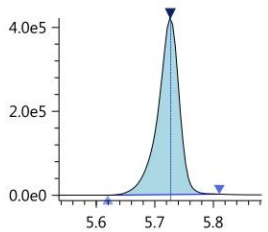
N-EtFOSA
Conc 0.9480
RT 5.763 Area 32270
Q 526.90>169.10 (-) 1.29e4



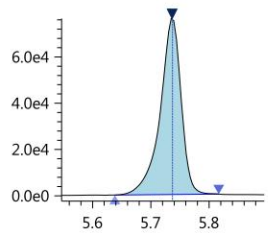
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.726 Area 1064572
ISTD 638.70>59.10 (-) 4.22e5



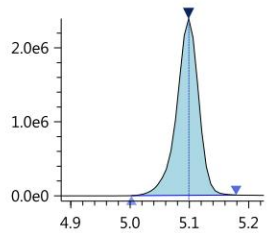
N-EtFOSE-d9
Conc 4.9928
RT 5.726 Area 1064572
Q 638.70>59.10 (-) 4.22e5



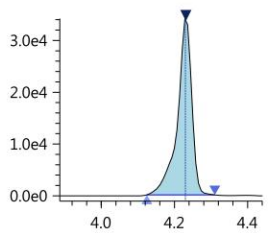
N-EtFOSE
Conc 0.9494
RT 5.737 Area 190449
Q 630.00>58.90 (-) 7.66e4



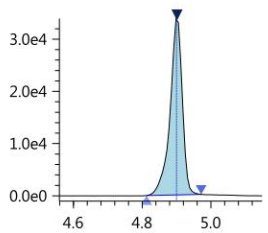
13C7-PFUnDA_IS
Conc 5.0000
RT 5.099 Area 6184497
ISTD 570.00>525.00 (-) 2.40e6



PFPeS
Conc 0.9507
RT 4.231 Area 92529
Q 349.00>99.00 (-) 3.42e4



PFNS
Conc 0.8802
RT 4.901 Area 83850
Q 549.00>99.00 (-) 3.39e4



190301_012

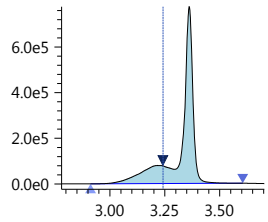
Sample ID: 5.0 PPB ICAL
Date acquired: 3/1/2019 5:19:33 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_012.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.241	2770934	2770934	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.241	2770934	6000921	26	5.1852	ng/mL	5.0000
PFBA	Auto	3.362	2504289	2770934	2	4.7717	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.954	1769740	1769740	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.954	1769740	6000921	26	5.1088	ng/mL	5.0000
PFPeA	Auto	3.954	3977697	1769740	4	4.7780	ng/mL	5.0000
PFBS_1	Auto	4.003	846559	892854	16	4.4181	ng/mL	4.4368
PFBS-13C	Auto	4.005	892854	6000921	26	5.7038	ng/mL	5.0000
PFBS-13C_IS	Auto	4.005	892854	892854	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.220	5550645	5550645	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.220	5550645	6000921	26	5.1960	ng/mL	5.0000
PFHxA	Auto	4.219	4600295	5550645	6	4.6114	ng/mL	5.0000
HPFO_DA	Auto	4.280	1183805	1085979	3	5.0797	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.281	1085979	1085979	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.281	1085979	6000921	26	4.6817	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.194	710945	710945	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.194	710945	6000921	26	5.0974	ng/mL	5.0000
4_2-FTS_1	Auto	4.194	741024	710945	5	4.5080	ng/mL	4.6861
PFHpA	Auto	4.401	4478152	5779748	8	4.8900	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.401	5779748	5779748	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.401	5779748	6000921	26	5.2605	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.402	650304	650304	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.402	650304	6000921	26	6.0395	ng/mL	5.0000
PFHxS_1	Auto	4.399	618322	650304	7	4.3689	ng/mL	4.5654
6_2-FTS-13C	Auto	4.558	613932	6000921	26	4.9758	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.558	613932	613932	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.557	618690	708863	15	4.8124	ng/mL	4.7558
PFHpS_1	Auto	4.558	676285	650304	7	4.2293	ng/mL	4.7672
PFOA-13C_IS	Auto	4.567	5314865	5314865	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.567	5314865	6000921	26	4.8532	ng/mL	5.0000
PFOA	Auto	4.567	4385189	5314865	9	4.9815	ng/mL	5.0000
PFOS_1	Auto	4.721	423619	660241	13	4.7096	ng/mL	4.6461
PFOS-13C_IS	Auto	4.721	660241	660241	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.721	660241	6000921	26	5.1683	ng/mL	5.0000
PFNA-13C_IS	Auto	4.737	6472684	6472684	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.737	6472684	6000921	26	5.2697	ng/mL	5.0000
PFNA	Auto	4.737	4278171	6472684	11	4.8343	ng/mL	5.0000
PFDA-13C_IS	Auto	4.918	5944393	5944393	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.918	5944393	6000921	26	5.1302	ng/mL	5.0000
PFDA	Auto	4.918	4309546	5944393	12	4.4428	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.917	708863	708863	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.917	708863	6000921	26	4.9242	ng/mL	5.0000
8_2-FTS_1	Auto	4.916	658391	708863	15	4.8564	ng/mL	4.8002
PFDS_1	Auto	5.076	498437	660241	13	4.5554	ng/mL	4.8233
PFUnA	Auto	5.099	4017638	5253925	14	4.9162	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.099	5253925	5253925	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.099	5253925	6000921	26	5.0394	ng/mL	5.0000
PFDoA	Auto	5.276	4422935	7667261	17	4.8134	ng/mL	5.0000
PFDoA-13C	Auto	5.276	7667261	6000921	26	5.0489	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.276	7667261	7667261	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.283	813673	708863	15	4.9903	ng/mL	4.8310
PFTrDA	Auto	5.445	4958840	5833026	22	4.7525	ng/mL	5.0000
PFTeDA	Auto	5.592	2015141	5833026	22	4.8625	ng/mL	5.0000
PFTeDA-13C	Auto	5.591	5833026	6000921	26	5.1877	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.591	5833026	5833026	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.236	2021171	2021171	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.236	2021171	6000921	26	5.1819	ng/mL	5.0000
FOSA	Auto	5.236	2659922	2021171	18	5.0061	ng/mL	5.0000
N-MeFOSAA	Auto	5.023	885237	1430138	19	5.0197	ng/mL	5.0000
N-MeFOSAA-d3	Auto	5.021	1430138	6000921	26	5.0245	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.021	1430138	1430138	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.623	744608	744608	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.623	744608	6000921	26	5.2533	ng/mL	5.0000
N-MeFOSA	Auto	5.626	840774	744608	1	4.7659	ng/mL	5.0000
N-MeFOSE-d7	Auto	5.596	789199	6000921	26	5.2651	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.596	789199	789199	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.604	1016949	789199	20	4.9888	ng/mL	5.0000

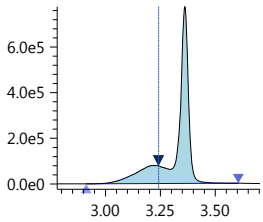
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.121	857722	1452753	21	5.0500	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.117	1452753	1452753	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.117	1452753	6000921	26	5.1161	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.756	998851	998851	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.756	998851	6000921	26	5.0894	ng/mL	5.0000
N-EtFOSA	Auto	5.762	169116	998851	23	5.0795	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.724	1066377	1066377	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.724	1066377	6000921	26	5.1543	ng/mL	5.0000
N-EtFOSE	Auto	5.735	985649	1066377	24	4.9329	ng/mL	5.0000
13C7-PFUnDA_IS	Auto	5.098	6000921	6000921	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.234	496225	892854	16	4.2919	ng/mL	4.7046
PFNS	Auto	4.899	416713	660241	13	4.5087	ng/mL	4.8079

PFBA-13C_IS
Conc 5.0000
RT 3.241 Area 2770934
ISTD 216.90>172.15 (-) 7.77e5



PFBA-13C
Conc 5.1852
RT 3.241 Area 2770934
Q 216.90>172.15 (-) 7.77e5



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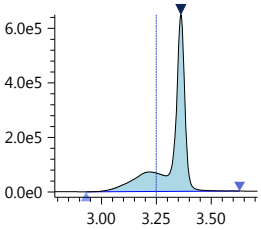
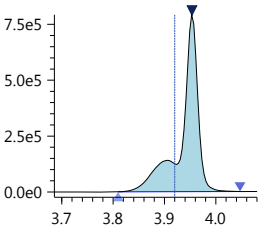
Conc 4.7717
RT 3.362 Area 2504289
Q 213.00>169.10 (-) 6.50e5



PFPeA-13C_IS
Conc 5.0000
RT 3.954 Area 1769740
ISTD 267.90>223.00 (-) 7.93e5



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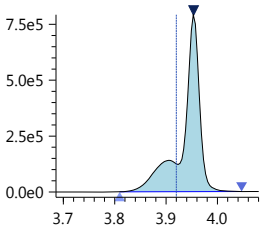
Conc 5.1088
RT 3.954 Area 1769740
Q 267.90>223.00 (-) 7.93e5



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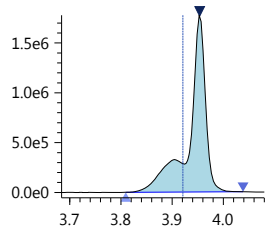
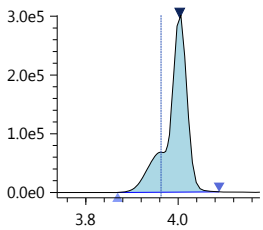
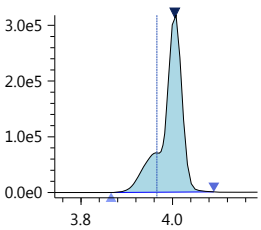
Conc 4.7780
RT 3.954 Area 3977697
Q 263.05>219.10 (-) 1.78e6



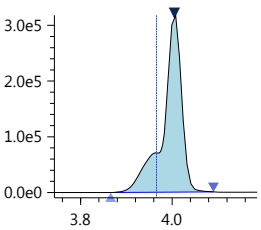
PFBS_1
Conc 4.4181
RT 4.003 Area 846559
Q 299.00>80.00 (-) 3.02e5



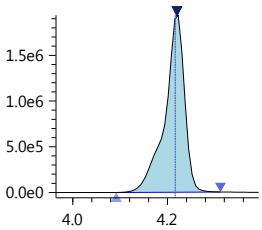
PFBS-13C
Conc 5.7038
RT 4.005 Area 892854
Q 301.80>80.00 (-) 3.18e5



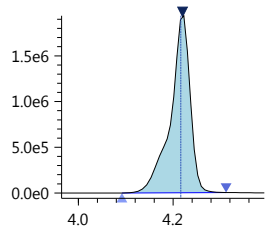
PFBS-13C_IS
Conc 5.0000
RT 4.005 Area 892854
ISTD 301.80>80.00 (-) 3.18e5



PFHxA-13C_IS
Conc 5.0000
RT 4.220 Area 5550645
ISTD 314.90>270.10 (-) 1.94e6



PFHxA-13C
Conc 5.1960
RT 4.220 Area 5550645
Q 314.90>270.10 (-) 1.94e6



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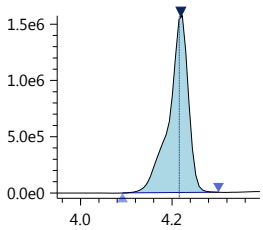
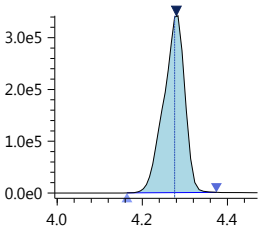
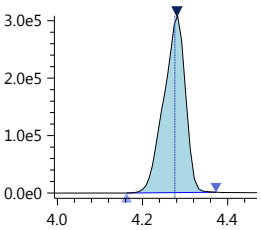
Conc 4.6114
RT 4.219 Area 4600295
Q 313.00>269.00 (-) 1.58e6



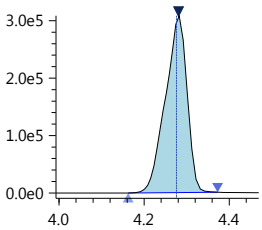
HPFO_DA
Conc 5.0797
RT 4.280 Area 1183805
Q 329.00>169.00 (-) 3.42e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.281 Area 1085979
ISTD 332.00>286.80 (-) 3.09e5



HFPO_DA-13C
Conc 4.6817
RT 4.281 Area 1085979
Q 332.00>286.80 (-) 3.09e5

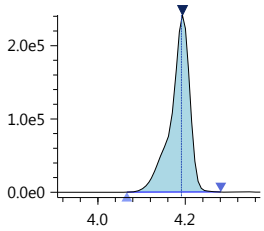


4_2-FTS-13C_IS

Conc 5.0000

RT 4.194 Area 710945

ISTD 328.80>309.05 (-) 2.42e5

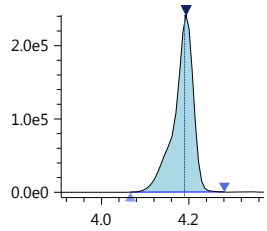


4_2-FTS-13C

Conc 5.0974

RT 4.194 Area 710945

Q 328.80>309.05 (-) 2.42e5

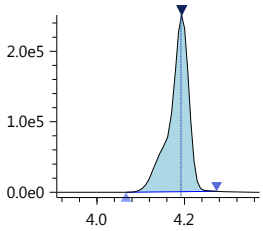


4_2-FTS_1

Conc 4.5080

RT 4.194 Area 741024

Q 327.00>307.05 (-) 2.51e5

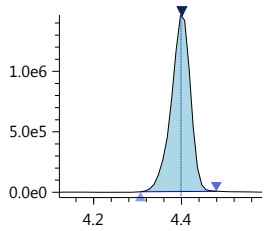


PFHpA

Conc 4.8900

RT 4.401 Area 4478152

Q 362.90>319.00 (-) 1.47e6

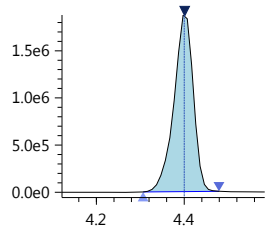


PFHpA-13C_IS

Conc 5.0000

RT 4.401 Area 5779748

ISTD 366.90>322.10 (-) 1.88e6

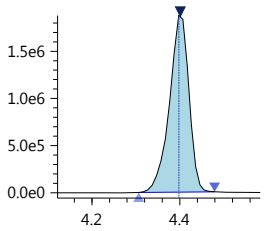


PFHpA-13C

Conc 5.2605

RT 4.401 Area 5779748

Q 366.90>322.10 (-) 1.88e6

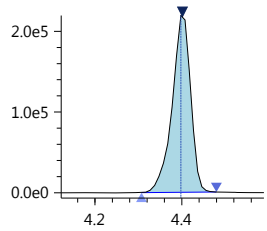


PFHxS-18O_IS

Conc 5.0000

RT 4.402 Area 650304

ISTD 402.70>84.05 (-) 2.20e5

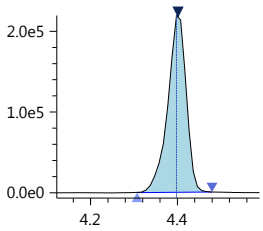


PFHxS-18O

Conc 6.0395

RT 4.402 Area 650304

Q 402.70>84.05 (-) 2.20e5

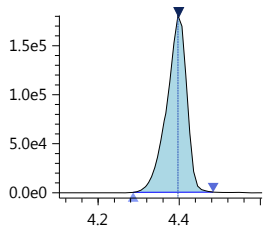


PFHxS_1

Conc 4.3689

RT 4.399 Area 618322

Q 399.00>80.00 (-) 1.81e5

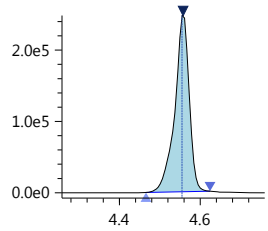


6_2-FTS-13C

Conc 4.9758

RT 4.558 Area 613932

Q 428.90>409.00 (-) 2.49e5

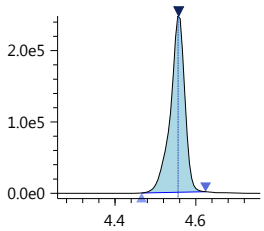


6_2-FTS-13C_IS

Conc 5.0000

RT 4.558 Area 613932

ISTD 428.90>409.00 (-) 2.49e5

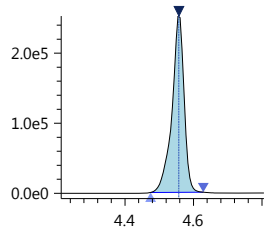


6_2-FTS_1

Conc 4.8124

RT 4.557 Area 618690

Q 427.00>407.00 (-) 2.53e5

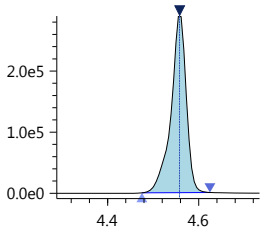


PFHpS_1

Conc 4.2293

RT 4.558 Area 676285

Q 449.00>80.15 (-) 2.90e5

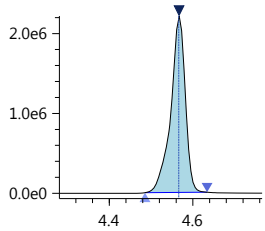


PFOA-13C_IS

Conc 5.0000

RT 4.567 Area 5314865

ISTD 416.80>372.05 (-) 2.22e6

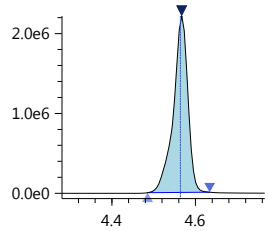


PFOA-13C

Conc 4.8532

RT 4.567 Area 5314865

Q 416.80>372.05 (-) 2.22e6

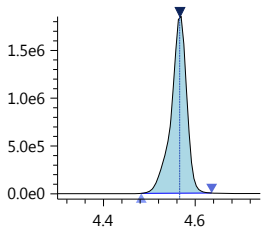


PFOA

Conc 4.9815

RT 4.567 Area 4385189

Q 413.00>369.00 (-) 1.85e6

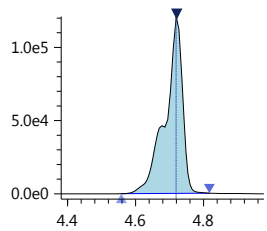


PFOS_1

Conc 4.7096

RT 4.721 Area 423619

Q 499.00>80.00 (-) 1.21e5

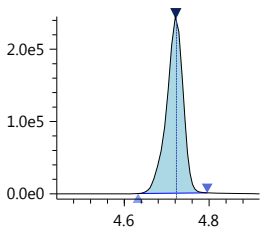


PFOS-13C_IS

Conc 5.0000

RT 4.721 Area 660241

ISTD 502.80>80.05 (-) 2.45e5

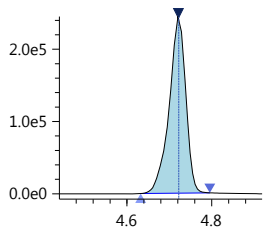


PFOS-13C

Conc 5.1683

RT 4.721 Area 660241

Q 502.80>80.05 (-) 2.45e5

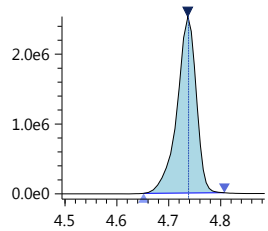


PFNA-13C_IS

Conc 5.0000

RT 4.737 Area 6472684

ISTD 467.80>423.00 (-) 2.54e6

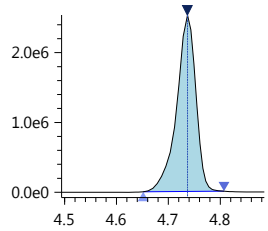


PFNA-13C

Conc 5.2697

RT 4.737 Area 6472684

Q 467.80>423.00 (-) 2.54e6

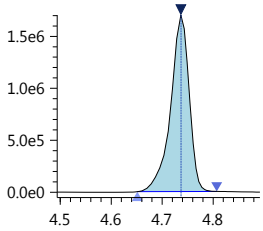


PFNA

Conc 4.8343

RT 4.737 Area 4278171

Q 463.00>418.90 (-) 1.71e6

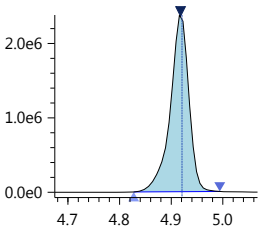


PFDA-13C_IS

Conc 5.0000

RT 4.918 Area 5944393

ISTD 514.80>469.95 (-) 2.38e6

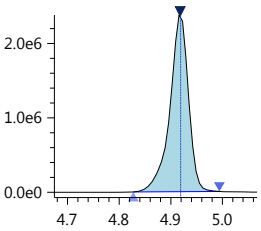


PFDA-13C

Conc 5.1302

RT 4.918 Area 5944393

Q 514.80>469.95 (-) 2.38e6

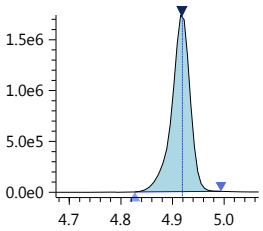


PFDA

Conc 4.4428

RT 4.918 Area 4309546

Q 513.00>468.80 (-) 1.74e6

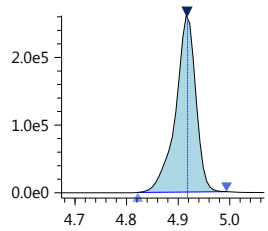


8_2-FTS-13C_IS

Conc 5.0000

RT 4.917 Area 708863

ISTD 528.80>509.00 (-) 2.62e5

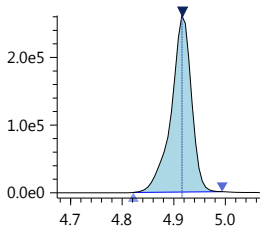


8_2-FTS-13C

Conc 4.9242

RT 4.917 Area 708863

Q 528.80>509.00 (-) 2.62e5

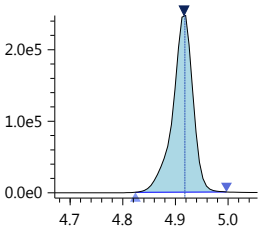


8_2-FTS_1

Conc 4.8564

RT 4.916 Area 658391

Q 527.10>506.90 (-) 2.48e5

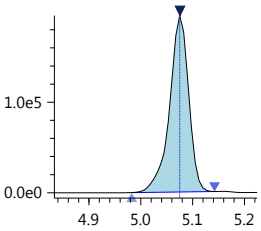


PFDS_1

Conc 4.5554

RT 5.076 Area 498437

Q 599.00>79.90 (-) 1.96e5

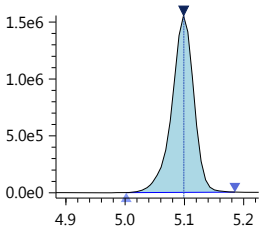


PFUnA

Conc 4.9162

RT 5.099 Area 4017638

Q 563.00>518.90 (-) 1.56e6

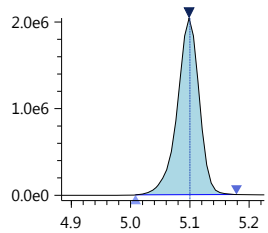


PFUnA-13C_IS

Conc 5.0000

RT 5.099 Area 5253925

ISTD 564.80>519.95 (-) 2.05e6

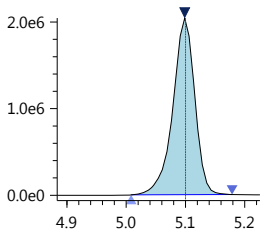


PFUnA-13C

Conc 5.0394

RT 5.099 Area 5253925

Q 564.80>519.95 (-) 2.05e6

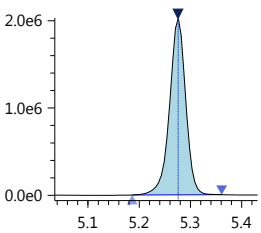


PFDoA

Conc 4.8134

RT 5.276 Area 4422935

Q 613.05>569.00 (-) 2.03e6

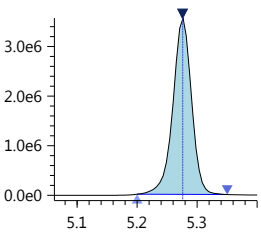


PFDoA-13C

Conc 5.0489

RT 5.276 Area 7667261

Q 614.80>569.95 (-) 3.57e6

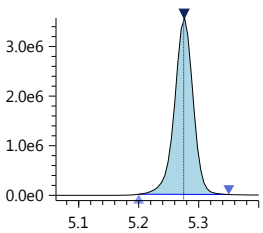


PFDoA-13C_IS

Conc 5.0000

RT 5.276 Area 7667261

ISTD 614.80>569.95 (-) 3.57e6

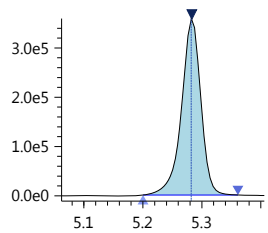


10_2-FtS_1

Conc 4.9903

RT 5.283 Area 813673

Q 627.00>606.95 (-) 3.60e5

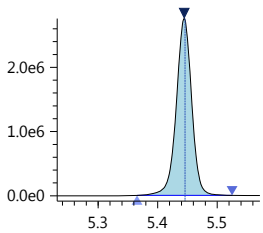


PFTrDA

Conc 4.7525

RT 5.445 Area 4958840

Q 663.00>618.90 (-) 2.76e6

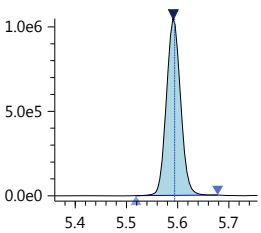


PFTeDA

Conc 4.8625

RT 5.592 Area 2015141

Q 713.40>669.00 (-) 1.05e6

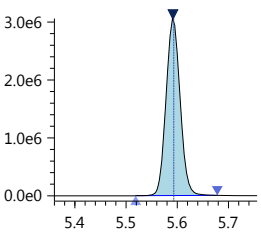


PFTeDA-13C

Conc 5.1877

RT 5.591 Area 5833026

Q 714.70>669.90 (-) 3.06e6

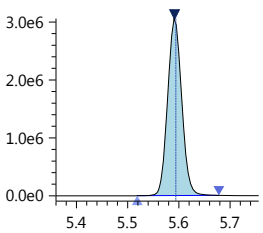


PFTeDA-13C_IS

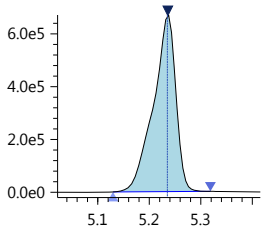
Conc 5.0000

RT 5.591 Area 5833026

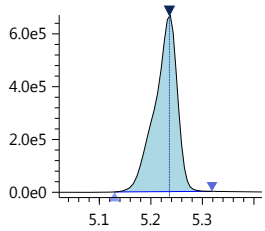
ISTD 714.70>669.90 (-) 3.06e6



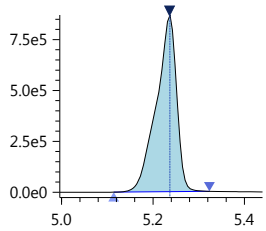
FOSA-13C_IS
Conc 5.0000
RT 5.236 Area 2021171
ISTD 506.00>78.05 (-) 6.72e5



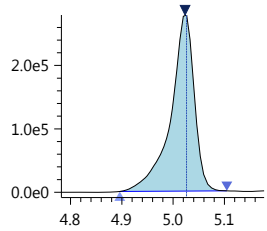
FOSA-13C
Conc 5.1819
RT 5.236 Area 2021171
Q 506.00>78.05 (-) 6.72e5



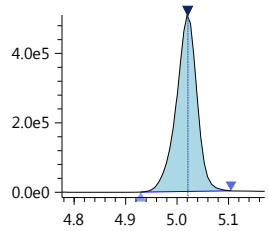
FOSA
Conc 5.0061
RT 5.236 Area 2659922
Q 498.20>78.00 (-) 8.71e5



N-MeFOSAA
Conc 5.0197
RT 5.023 Area 885237
Q 570.20>419.00 (-) 2.80e5



N-MeFOSAA-d3
Conc 5.0245
RT 5.021 Area 1430138
Q 572.80>419.05 (-) 5.11e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.021 Area 1430138
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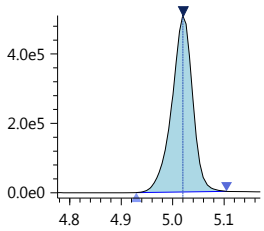

N-MeFOSA-d3_IS
Conc 5.0000
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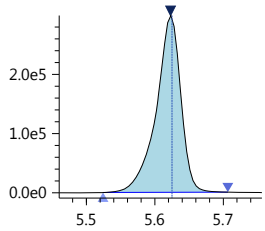
ISTD 514.90>168.90 (-) 2.99e5



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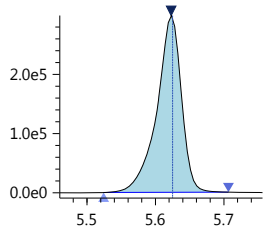
Conc 5.2533
RT 5.623 Area 744608
Q 514.90>168.90 (-) 2.99e5



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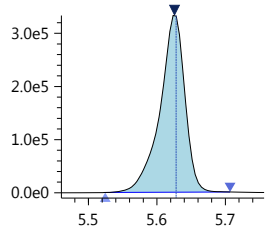
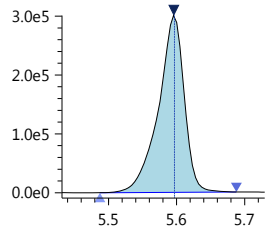
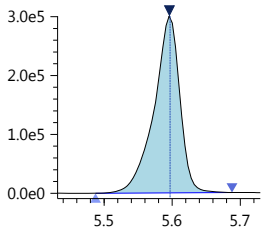
Conc 4.7659
RT 5.626 Area 840774
Q 512.00>169.10 (-) 3.34e5



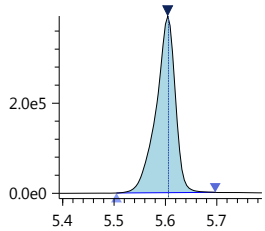
N-MeFOSE-d7
Conc 5.2651
RT 5.596 Area 789199
Q 622.70>59.10 (-) 3.01e5



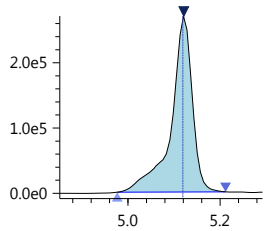
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.596 Area 789199
ISTD 622.70>59.10 (-) 3.01e5



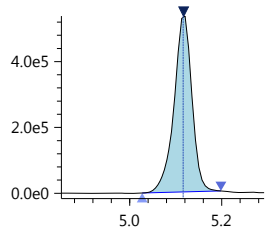
N-MeFOSE
Conc 4.9888
RT 5.604 Area 1016949
Q 616.00>59.00 (-) 3.93e5



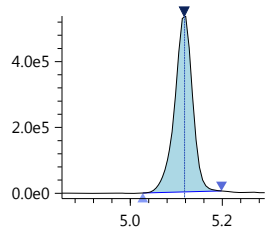
N-EtFOSAA
Conc 5.0500
RT 5.121 Area 857722
Q 584.20>418.95 (-) 2.72e5



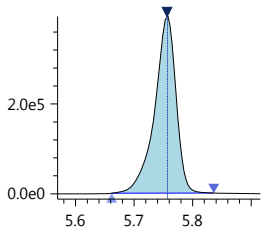
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1452753
ISTD 588.80>419.00 (-) 5.38e5



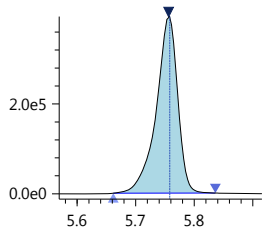
N-EtFOSAA-d5
Conc 5.1161
RT 5.117 Area 1452753
Q 588.80>419.00 (-) 5.38e5



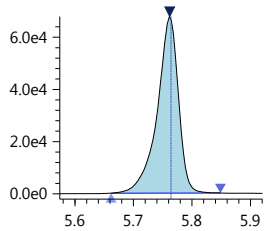
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.756 Area 998851
ISTD 530.90>169.15 (-) 3.95e5



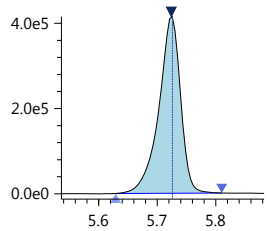
N-EtFOSA-d9
Conc 5.0894
RT 5.756 Area 998851
Q 530.90>169.15 (-) 3.95e5



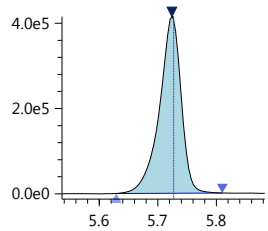
N-EtFOSA
Conc 5.0795
RT 5.762 Area 169116
Q 526.90>169.10 (-) 6.79e4



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 1066377
ISTD 638.70>59.10 (-) 4.16e5

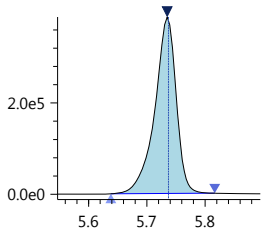


N-EtFOSE-d9
Conc 5.1543
RT 5.724 Area 1066377
Q 638.70>59.10 (-) 4.16e5



N-EtFOSE

Conc 4.9329
RT 5.735 Area 985649
Q 630.00>58.90 (-) 3.88e5



13C7-PFUnDA_IS

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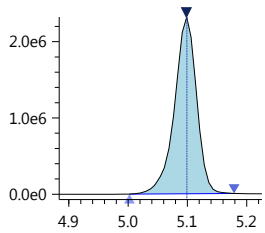
RT 5.098 Area 6000921
ISTD 570.00>525.00 (-) 2.32e6



PFPeS

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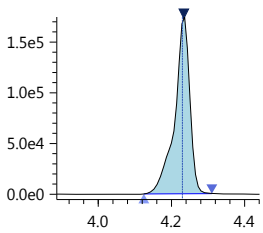
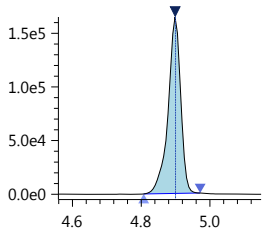
RT 4.234 Area 496225
Q 349.00>99.00 (-) 1.75e5



PFNS

Conc 4.5087
RT 4.899 Area 416713
Q 549.00>99.00 (-) 1.65e5



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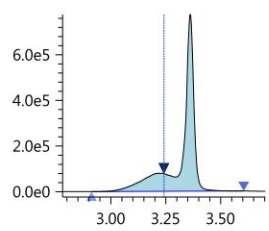
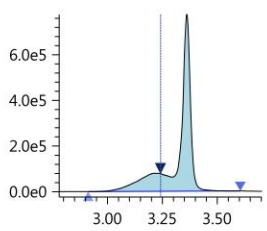
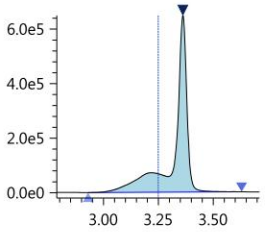
PFBA-13C_IS
Conc 5.0000
RT 3.241 Area 2770934
ISTD 216.90>172.15 (-) 7.77e5



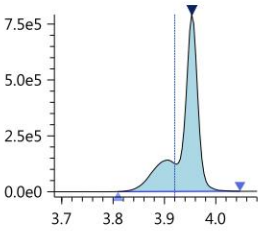
PFBA-13C
Conc 5.1852
RT 3.241 Area 2770934
Q 216.90>172.15 (-) 7.77e5



PFBA
Conc 4.7717
RT 3.362 Area 2504289
Q 213.00>169.10 (-) 6.50e5



PFPeA-13C_IS
Conc 5.0000
RT 3.954 Area 1769740
ISTD 267.90>223.00 (-) 7.93e5



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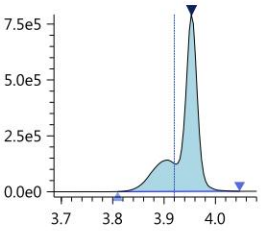
Conc 5.1088
RT 3.954 Area 1769740
Q 267.90>223.00 (-) 7.93e5



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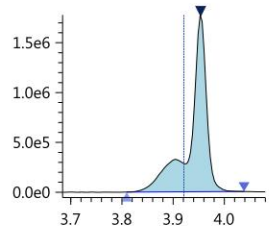

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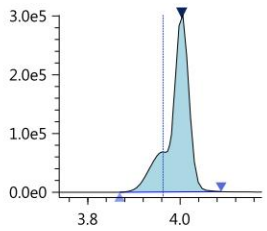

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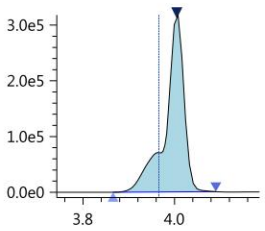
RT 4.005 Area 892854
Q 301.80>80.00 (-) 3.18e5



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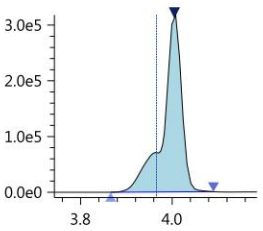

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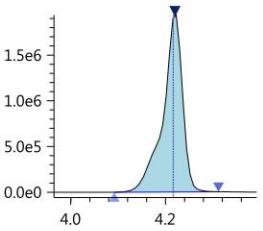
ISTD 314.90>270.10 (-) 1.94e6



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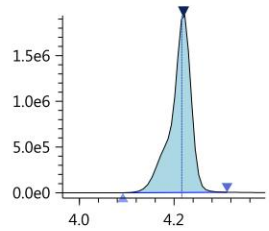
Q 314.90>270.10 (-) 1.94e6



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Conc 4.0012
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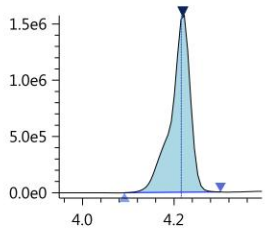

HPFO_DA
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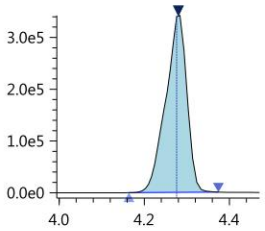
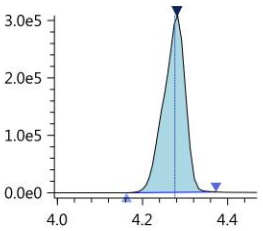
Q 329.00>169.00 (-) 3.42e5



HFPO_DA-13C_IS
Conc 5.0000
RT 4.281 Area 1085979
ISTD 332.00>286.80 (-) 3.09e5



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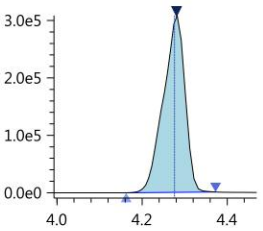
Q 332.00>286.80 (-) 3.09e5



4_2-FTS-13C_IS
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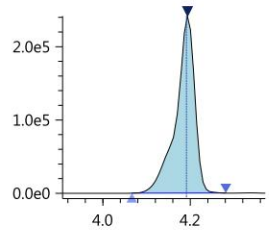
RT 4.194 Area 710945
ISTD 328.80>309.05 (-) 2.42e5



4_2-FTS-13C
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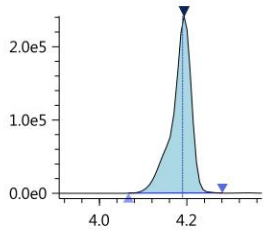
Q 328.80>309.05 (-) 2.42e5



4_2-FTS_1
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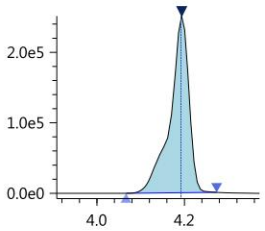
RT 4.194 Area 741024
Q 327.00>307.05 (-) 2.51e5



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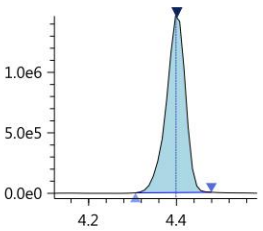
Q 362.90>319.00 (-) 1.47e6



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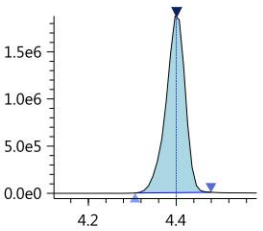
RT 4.401 Area 5779748
ISTD 366.90>322.10 (-) 1.88e6



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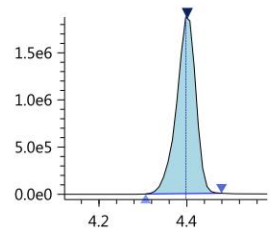
Q 366.90>322.10 (-) 1.88e6



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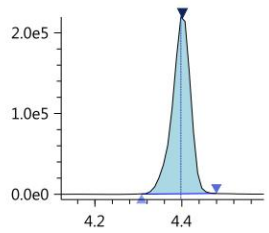
RT 4.402 Area 650304
ISTD 402.70>84.05 (-) 2.20e5



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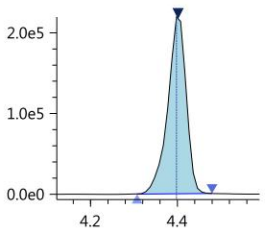

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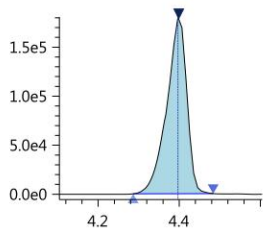
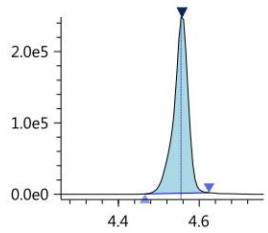
Conc 4.5759
RT 4.399 Area 618322
Q 399.00>80.00 (-) 1.81e5



6_2-FTS-13C
Conc 4.9758
RT 4.558 Area 613932
Q 428.90>409.00 (-) 2.49e5



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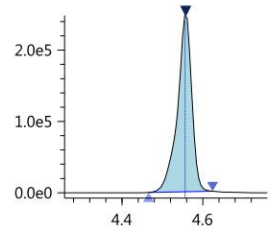

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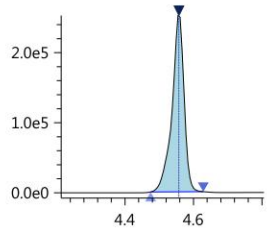
Q 427.00>407.00 (-) 2.53e5



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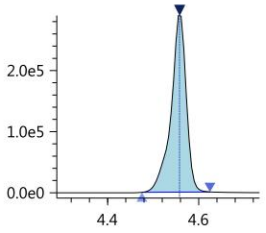
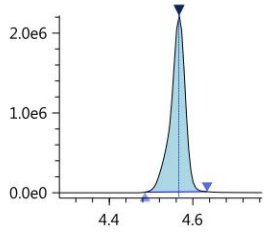


PFOA-13C_IS
Conc 5.0000
RT 4.567 Area 5314865
ISTD 416.80>372.05 (-) 2.22e6



PFOA-13C
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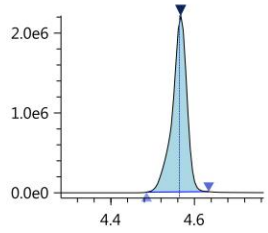
Q 416.80>372.05 (-) 2.22e6



PFOA
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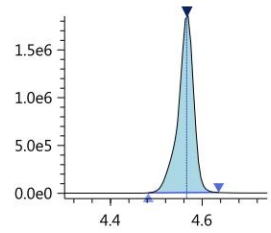
RT 4.567 Area 4385189
Q 413.00>369.00 (-) 1.85e6



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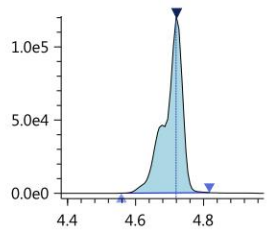
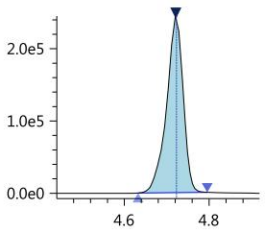
RT 4.721 Area 423619
Q 499.00>80.00 (-) 1.21e5



PFOS-13C_IS
Conc 5.0000
RT 4.721 Area 660241
ISTD 502.80>80.05 (-) 2.45e5



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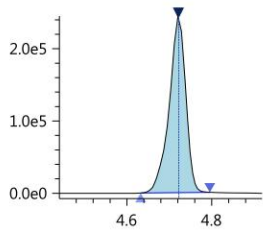
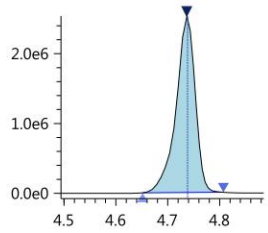


PFNA-13C_IS
Conc 5.0000
RT 4.737 Area 6472684
ISTD 467.80>423.00 (-) 2.54e6



PFNA-13C
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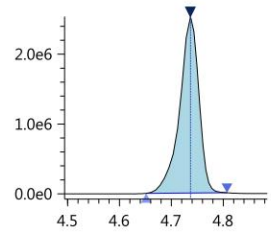
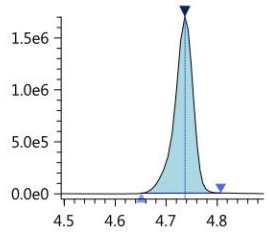
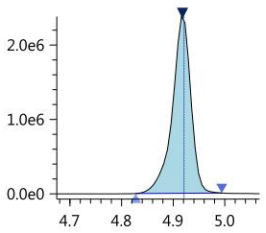
Q 467.80>423.00 (-) 2.54e6



PFNA
Conc 4.5364
RT 4.737 Area 4278171
Q 463.00>418.90 (-) 1.71e6



PFDA-13C_IS
Conc 5.0000
RT 4.918 Area 5944393
ISTD 514.80>469.95 (-) 2.38e6



PFDA-13C
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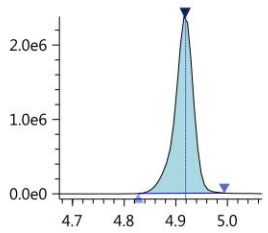
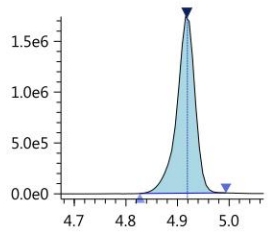
RT 4.918 Area 5944393
Q 514.80>469.95 (-) 2.38e6



PFDA
Conc 4.4428
RT 4.918 Area 4309546
Q 513.00>468.80 (-) 1.74e6



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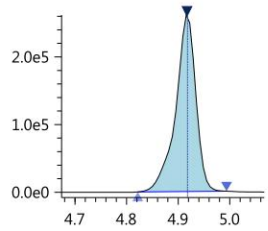
Conc 5.0000
RT 4.917 Area 708863
ISTD 528.80>509.00 (-) 2.62e5



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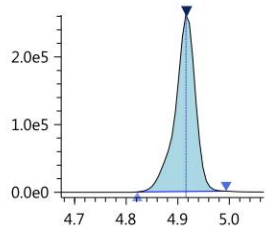
Q 528.80>509.00 (-) 2.62e5



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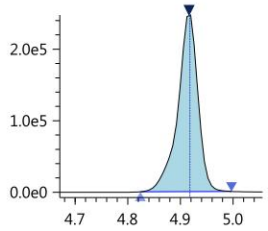
RT 4.916 Area 658391
Q 527.10>506.90 (-) 2.48e5



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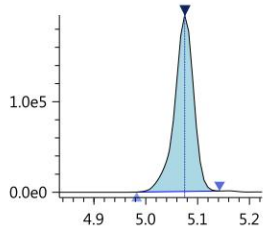
Q 599.00>79.90 (-) 1.96e5



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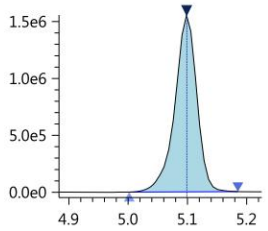
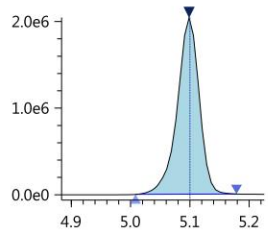


PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5253925
ISTD 564.80>519.95 (-) 2.05e6



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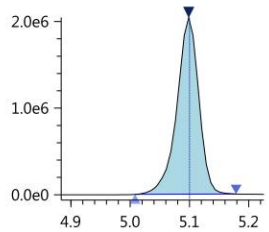

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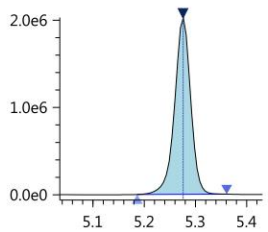

PFDoA-13C
Conc 5.0489
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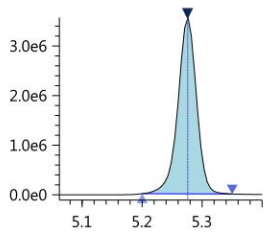
Q 614.80>569.95 (-) 3.57e6



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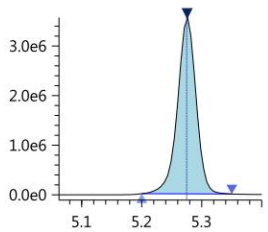
ISTD 614.80>569.95 (-) 3.57e6



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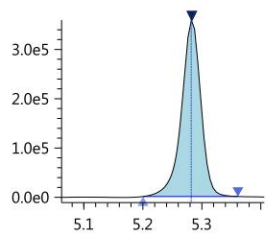
Q 627.00>606.95 (-) 3.60e5



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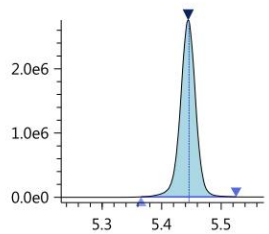
Q 663.00>618.90 (-) 2.76e6



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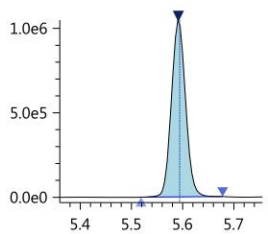
Q 713.40>669.00 (-) 1.05e6



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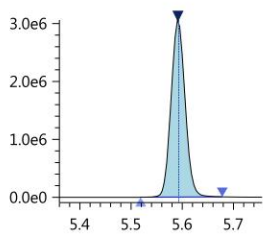
Q 714.70>669.90 (-) 3.06e6



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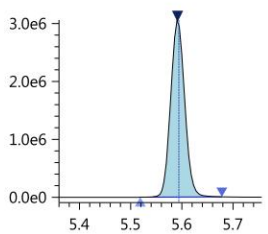

FOSA-13C_IS
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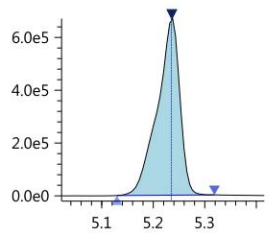

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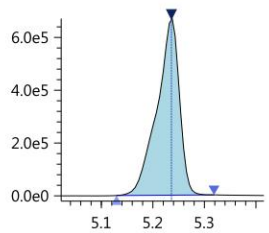

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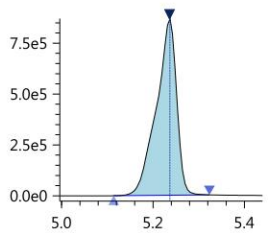
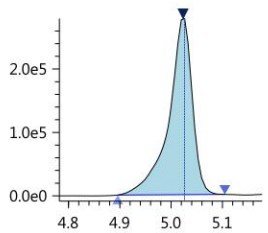
Q 498.20>78.00 (-) 8.71e5



N-MeFOSAA
Conc 5.0665
RT 5.023 Area 885237
Q 570.20>419.00 (-) 2.80e5



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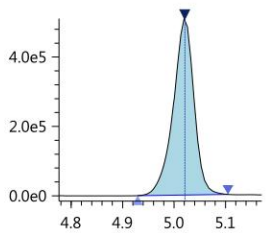
Q 572.80>419.05 (-) 5.11e5



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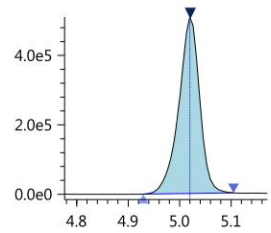

N-MeFOSA-d3_IS
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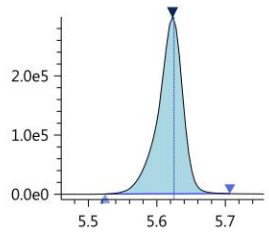
RT 5.623 Area 744608
ISTD 514.90>168.90 (-) 2.99e5



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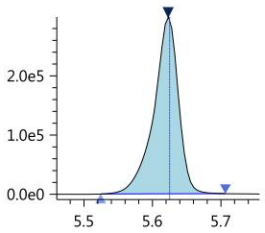
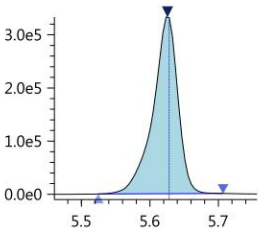
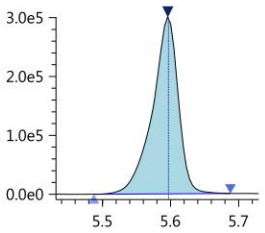


N-MeFOSA
Conc 4.7659
RT 5.626 Area 840774
Q 512.00>169.10 (-) 3.34e5



N-MeFOSE-d7
Conc 5.2651
RT 5.596 Area 789199
Q 622.70>59.10 (-) 3.01e5



N-MeFOSE-d7_IS
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RT 5.596 Area 789199
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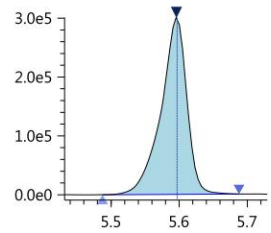

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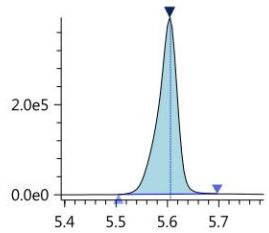
Conc 4.9888
RT 5.604 Area 1016949
Q 616.00>59.00 (-) 3.93e5



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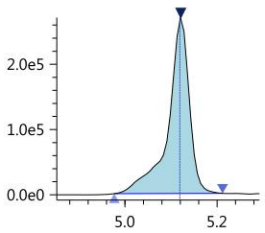
Conc 4.9705
RT 5.121 Area 857722
Q 584.20>418.95 (-) 2.72e5



N-EtFOSAA-d5_IS
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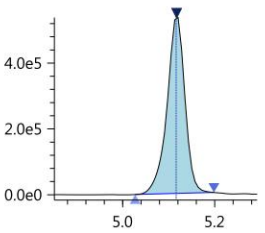
RT 5.117 Area 1452753
ISTD 588.80>419.00 (-) 5.38e5



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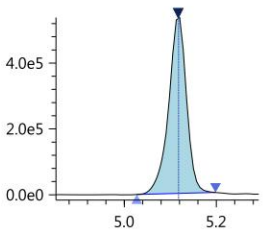
Q 588.80>419.00 (-) 5.38e5



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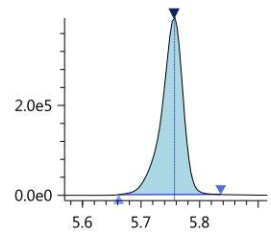
ISTD 530.90>169.15 (-) 3.95e5



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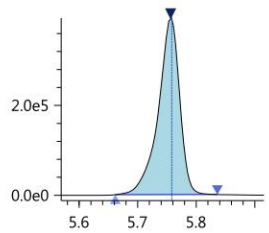
RT 5.756 Area 998851
Q 530.90>169.15 (-) 3.95e5



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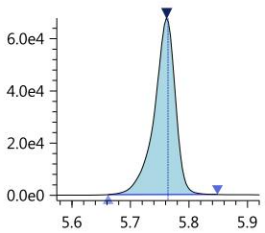
Q 526.90>169.10 (-) 6.79e4



N-EtFOSE-d9_IS
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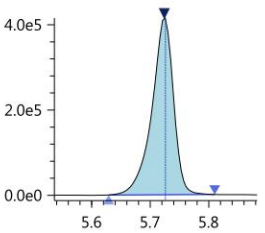

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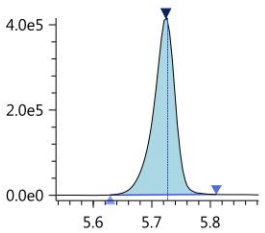

N-EtFOSE
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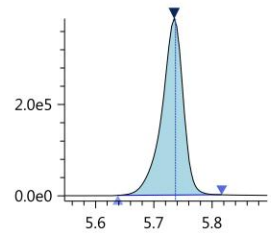
RT 5.735 Area 985649
Q 630.00>58.90 (-) 3.88e5



13C7-PFUnDA_IS
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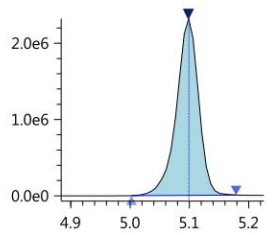
RT 5.098 Area 6000921
ISTD 570.00>525.00 (-) 2.32e6



PFPeS
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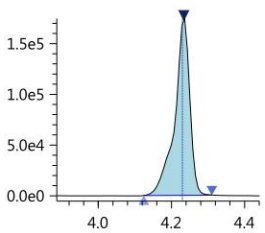
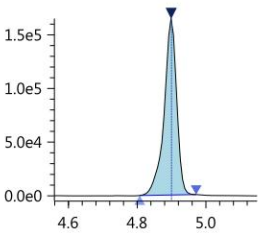
RT 4.234 Area 496225
Q 349.00>99.00 (-) 1.75e5



PFNS
Conc 4.5515
RT 4.899 Area 416713
Q 549.00>99.00 (-) 1.65e5



190301_013

Sample ID: 10.0 PPB ICAL
Date acquired: 3/1/2019 5:29:58 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_013.lcd
Vial: 6 | Inj. Volume: 15.0000uL | Tray: 0

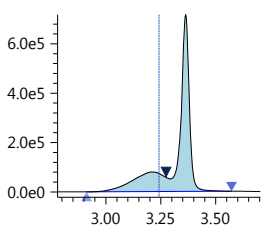
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.274	2691910	2691910	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.274	2691910	5793010	26	5.2181	ng/mL	5.0000
PFBA	Auto	3.364	4992193	2691910	2	9.7914	ng/mL	10.0000
PFPeA-13C_IS	Auto	3.949	1799690	1799690	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.949	1799690	5793010	26	5.3817	ng/mL	5.0000
PFPeA	Auto	3.949	8028212	1799690	4	9.6078	ng/mL	10.0000
PFBS_1	Auto	3.999	1448382	744361	16	9.0669	ng/mL	8.8737
PFBS-13C	Auto	4.000	744361	5793010	26	4.9258	ng/mL	5.0000
PFBS-13C_IS	Auto	4.000	744361	744361	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.212	5320094	5320094	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.212	5320094	5793010	26	5.1589	ng/mL	5.0000
PFHxA	Auto	4.212	9183741	5320094	6	9.6428	ng/mL	10.0000
HPFO_DA	Auto	4.274	2556829	1206611	3	9.8744	ng/mL	10.0000
HFPO_DA-13C_IS	Auto	4.274	1206611	1206611	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.274	1206611	5793010	26	5.3885	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.187	739311	739311	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.187	739311	5793010	26	5.4911	ng/mL	5.0000
4_2-FTS_1	Auto	4.187	1415356	739311	5	8.2799	ng/mL	9.3722
PFHpA	Auto	4.392	7959697	5037007	8	10.0149	ng/mL	10.0000
PFHpA-13C_IS	Auto	4.392	5037007	5037007	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.392	5037007	5793010	26	4.7491	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.392	560584	560584	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.392	560584	5793010	26	5.3931	ng/mL	5.0000
PFHxS_1	Auto	4.387	1130996	560584	7	9.2704	ng/mL	9.1308
6_2-FTS-13C	Auto	4.549	580959	5793010	26	4.8775	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.549	580959	580959	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.549	1121286	649697	15	9.5160	ng/mL	9.5117
PFHpS_1	Auto	4.550	1272087	560584	7	9.2284	ng/mL	9.5344
PFOA-13C_IS	Auto	4.559	5425366	5425366	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.559	5425366	5793010	26	5.1319	ng/mL	5.0000
PFOA	Auto	4.559	8524188	5425366	9	9.5091	ng/mL	10.0000
PFOS_1	Auto	4.712	817367	617822	13	9.7111	ng/mL	9.2923
PFOS-13C_IS	Auto	4.712	617822	617822	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.712	617822	5793010	26	5.0098	ng/mL	5.0000
PFNA-13C_IS	Auto	4.728	5597580	5597580	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.728	5597580	5793010	26	4.7208	ng/mL	5.0000
PFNA	Auto	4.728	7658292	5597580	11	10.0247	ng/mL	10.0000
PFDA-13C_IS	Auto	4.910	5460544	5460544	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.910	5460544	5793010	26	4.8818	ng/mL	5.0000
PFDA	Auto	4.910	8078657	5460544	12	9.0665	ng/mL	10.0000
8_2-FTS-13C_IS	Auto	4.909	649697	649697	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.909	649697	5793010	26	4.6752	ng/mL	5.0000
8_2-FTS_1	Auto	4.908	1125239	649697	15	9.0558	ng/mL	9.6004
PFDS_1	Auto	5.067	1026901	617822	13	10.0296	ng/mL	9.6467
PFUnA	Auto	5.090	7699196	4984787	14	9.9709	ng/mL	10.0000
PFUnA-13C_IS	Auto	5.091	4984787	4984787	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.091	4984787	5793010	26	4.9529	ng/mL	5.0000
PFDoA	Auto	5.268	8848985	7701842	17	9.5970	ng/mL	10.0000
PFDoA-13C	Auto	5.268	7701842	5793010	26	5.2537	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.268	7701842	7701842	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.276	1383241	649697	15	9.2561	ng/mL	9.6619
PFTrDA	Auto	5.437	9940395	5568717	22	9.9945	ng/mL	10.0000
PFTeDA	Auto	5.585	3862346	5568717	22	9.9027	ng/mL	10.0000
PFTeDA-13C	Auto	5.585	5568717	5793010	26	5.1304	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.585	5568717	5568717	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.228	2033580	2033580	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.228	2033580	5793010	26	5.4008	ng/mL	5.0000
FOSA	Auto	5.228	5330704	2033580	18	9.9714	ng/mL	10.0000
N-MeFOSAA	Auto	5.015	1859623	1398330	19	10.7848	ng/mL	10.0000
N-MeFOSAA-d3	Auto	5.012	1398330	5793010	26	5.0891	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.012	1398330	1398330	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.616	733720	733720	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.616	733720	5793010	26	5.3622	ng/mL	5.0000
N-MeFOSA	Auto	5.619	1659273	733720	1	9.5450	ng/mL	10.0000
N-MeFOSE-d7	Auto	5.589	740369	5793010	26	5.1166	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.589	740369	740369	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.597	1987518	740369	20	10.3931	ng/mL	10.0000

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.113	1565849	1297351	21	10.3236	ng/mL	10.0000
N-EtFOSAA-d5_IS	Auto	5.110	1297351	1297351	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.110	1297351	5793010	26	4.7328	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.748	999220	999220	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.748	999220	5793010	26	5.2740	ng/mL	5.0000
N-EtFOSA	Auto	5.754	340537	999220	23	10.2245	ng/mL	10.0000
N-EtFOSE-d9_IS	Auto	5.716	1049424	1049424	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.716	1049424	5793010	26	5.2544	ng/mL	5.0000
N-EtFOSE	Auto	5.727	2002887	1049424	24	10.1859	ng/mL	10.0000
13C7-PFUnDA_IS	Auto	5.090	5793010	5793010	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.226	986415	744361	16	10.2335	ng/mL	9.4092
PFNS	Auto	4.890	843875	617822	13	9.7572	ng/mL	9.6158

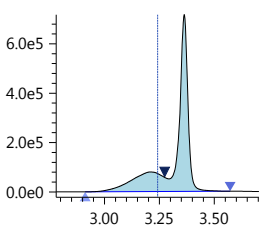
PFBA-13C_IS

Conc 5.0000
RT 3.274 Area 2691910
ISTD 216.90>172.15 (-) 7.18e5



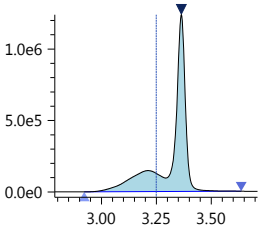
PFBA-13C

Conc 5.2181
RT 3.274 Area 2691910
Q 216.90>172.15 (-) 7.18e5



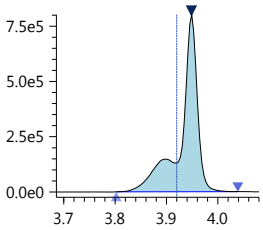
PFBA

Conc 9.7914
RT 3.364 Area 4992193
Q 213.00>169.10 (-) 1.24e6



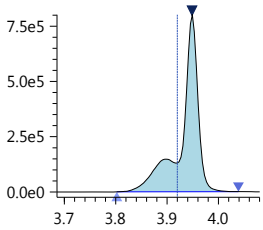
PFPeA-13C_IS

Conc 5.0000
RT 3.949 Area 1799690
ISTD 267.90>223.00 (-) 8.02e5



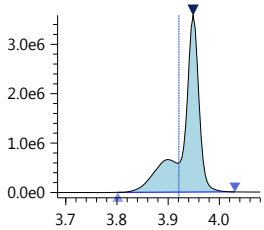
PFPeA-13C

Conc 5.3817
RT 3.949 Area 1799690
Q 267.90>223.00 (-) 8.02e5



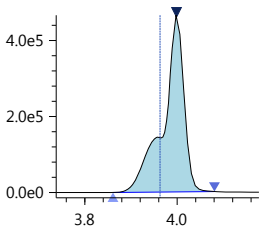
PFPeA

Conc 9.6078
RT 3.949 Area 8028212
Q 263.05>219.10 (-) 3.59e6



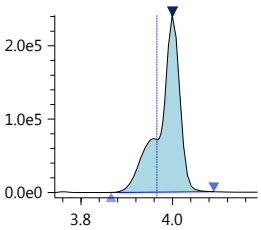
PFBS_1

Conc 9.0669
RT 3.999 Area 1448382
Q 299.00>80.00 (-) 4.67e5



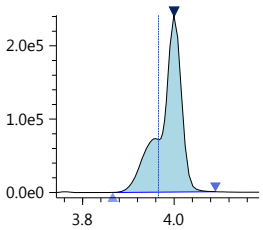
PFBS-13C

Conc 4.9258
RT 4.000 Area 744361
Q 301.80>80.00 (-) 2.42e5



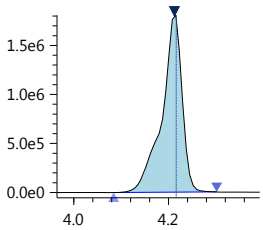
PFBS-13C_IS

Conc 5.0000
RT 4.000 Area 744361
ISTD 301.80>80.00 (-) 2.42e5



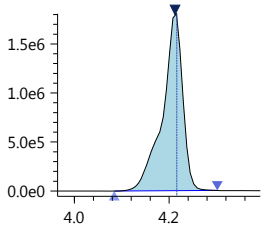
PFHxA-13C_IS

Conc 5.0000
RT 4.212 Area 5320094
ISTD 314.90>270.10 (-) 1.81e6



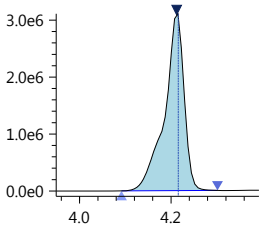
PFHxA-13C

Conc 5.1589
RT 4.212 Area 5320094
Q 314.90>270.10 (-) 1.81e6



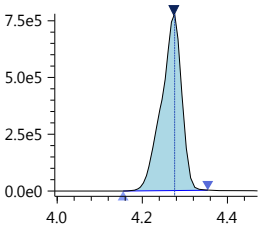
PFHxA

Conc 9.6428
RT 4.212 Area 9183741
Q 313.00>269.00 (-) 3.11e6



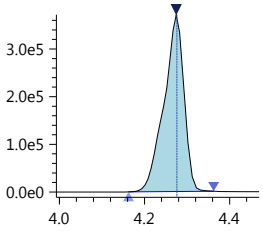
HPFO_DA

Conc 9.8744
RT 4.274 Area 2556829
Q 329.00>169.00 (-) 7.81e5



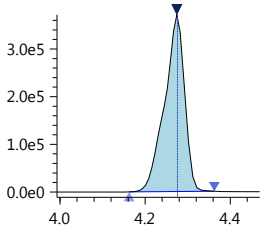
HFPO_DA-13C_IS

Conc 5.0000
RT 4.274 Area 1206611
ISTD 332.00>286.80 (-) 3.72e5

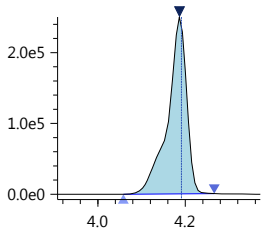


HFPO_DA-13C

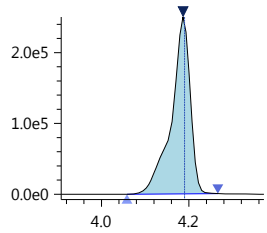
Conc 5.3885
RT 4.274 Area 1206611
Q 332.00>286.80 (-) 3.72e5



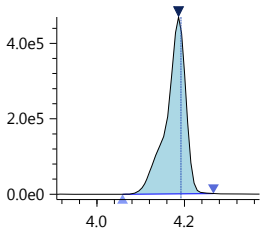
4_2-FTS-13C_IS
Conc 5.0000
RT 4.187 Area 739311
ISTD 328.80>309.05 (-) 2.50e5



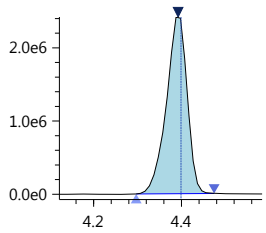
4_2-FTS-13C
Conc 5.4911
RT 4.187 Area 739311
Q 328.80>309.05 (-) 2.50e5



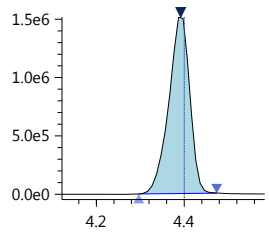
4_2-FTS_1
Conc 8.2799
RT 4.187 Area 1415356
Q 327.00>307.05 (-) 4.70e5



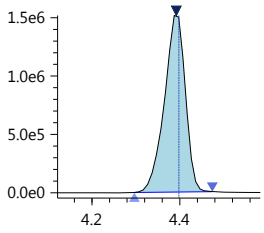
PFHpA
Conc 10.0149
RT 4.392 Area 7959697
Q 362.90>319.00 (-) 2.42e6



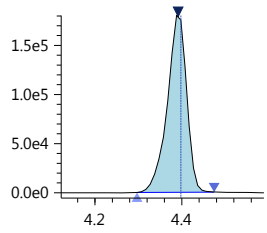
PFHpA-13C_IS
Conc 5.0000
RT 4.392 Area 5037007
ISTD 366.90>322.10 (-) 1.52e6



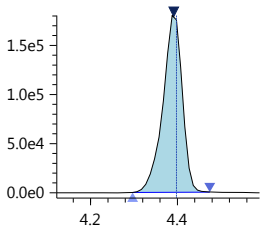
PFHpA-13C
Conc 4.7491
RT 4.392 Area 5037007
Q 366.90>322.10 (-) 1.52e6



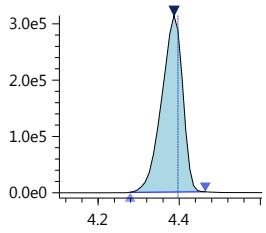
PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 560584
ISTD 402.70>84.05 (-) 1.80e5



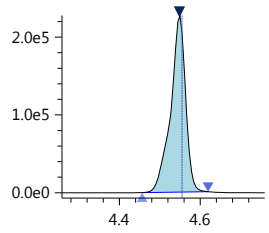
PFHxS-18O
Conc 5.3931
RT 4.392 Area 560584
Q 402.70>84.05 (-) 1.80e5



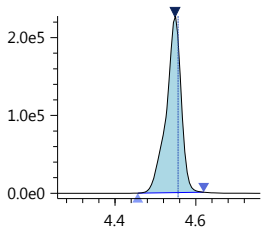
PFHxS_1
Conc 9.2704
RT 4.387 Area 1130996
Q 399.00>80.00 (-) 3.15e5



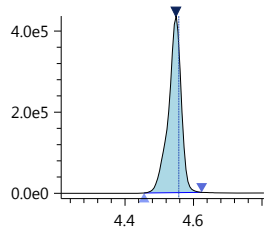
6_2-FTS-13C
Conc 4.8775
RT 4.549 Area 580959
Q 428.90>409.00 (-) 2.28e5



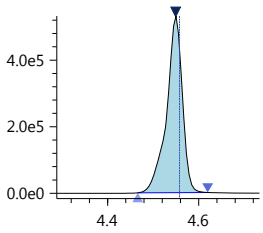
6_2-FTS-13C_IS
Conc 5.0000
RT 4.549 Area 580959
ISTD 428.90>409.00 (-) 2.28e5



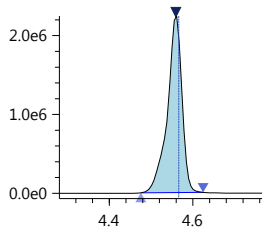
6_2-FTS_1
Conc 9.5160
RT 4.549 Area 1121286
Q 427.00>407.00 (-) 4.37e5



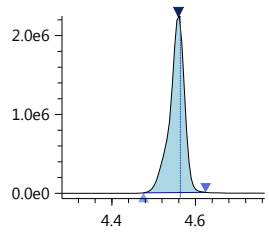
PFHpS_1
Conc 9.2284
RT 4.550 Area 1272087
Q 449.00>80.15 (-) 5.32e5



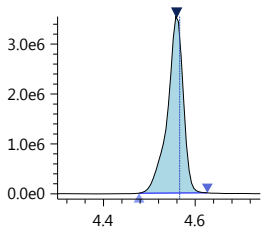
PFOA-13C_IS
Conc 5.0000
RT 4.559 Area 5425366
ISTD 416.80>372.05 (-) 2.25e6



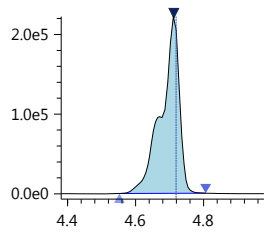
PFOA-13C
Conc 5.1319
RT 4.559 Area 5425366
Q 416.80>372.05 (-) 2.25e6



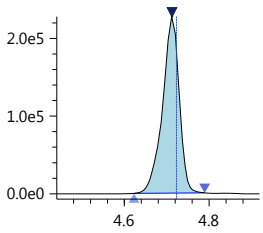
PFOA
Conc 9.5091
RT 4.559 Area 8524188
Q 413.00>369.00 (-) 3.55e6



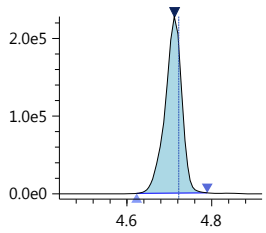
PFOS_1
Conc 9.7111
RT 4.712 Area 817367
Q 499.00>80.00 (-) 2.22e5



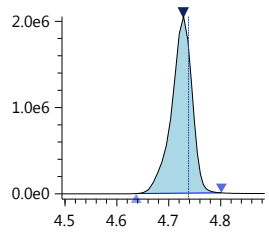
PFOS-13C_IS
Conc 5.0000
RT 4.712 Area 617822
ISTD 502.80>80.05 (-) 2.28e5



PFOS-13C
Conc 5.0098
RT 4.712 Area 617822
Q 502.80>80.05 (-) 2.28e5



PFNA-13C_IS
Conc 5.0000
RT 4.728 Area 5597580
ISTD 467.80>423.00 (-) 2.05e6

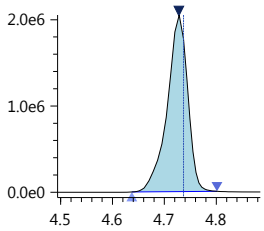


PFNA-13C

Conc 4.7208

RT 4.728 Area 5597580

Q 467.80>423.00 (-) 2.05e6

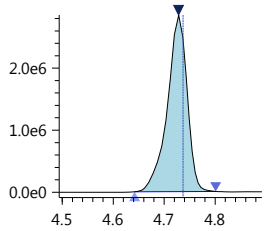


PFNA

Conc 10.0247

RT 4.728 Area 7658292

Q 463.00>418.90 (-) 2.86e6

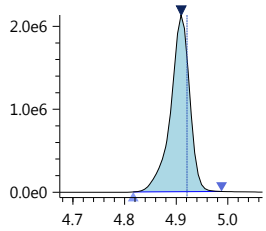


PFDA-13C_IS

Conc 5.0000

RT 4.910 Area 5460544

ISTD 514.80>469.95 (-) 2.14e6

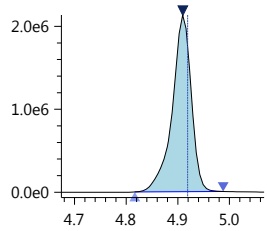


PFDA-13C

Conc 4.8818

RT 4.910 Area 5460544

Q 514.80>469.95 (-) 2.14e6

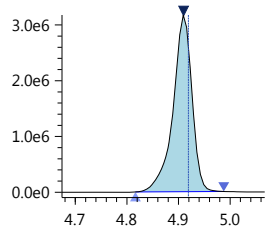


PFDA

Conc 9.0665

RT 4.910 Area 8078657

Q 513.00>468.80 (-) 3.18e6

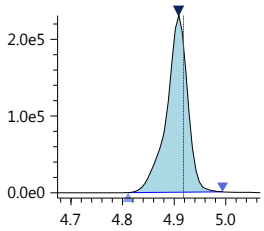


8_2-FTS-13C_IS

Conc 5.0000

RT 4.909 Area 649697

ISTD 528.80>509.00 (-) 2.31e5

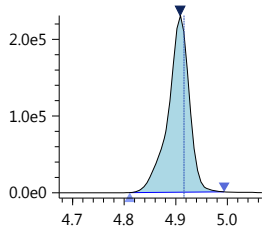


8_2-FTS-13C

Conc 4.6752

RT 4.909 Area 649697

Q 528.80>509.00 (-) 2.31e5

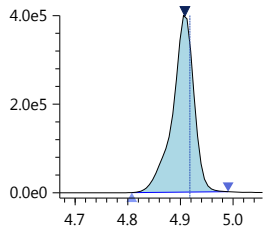


8_2-FTS_1

Conc 9.0558

RT 4.908 Area 1125239

Q 527.10>506.90 (-) 4.00e5

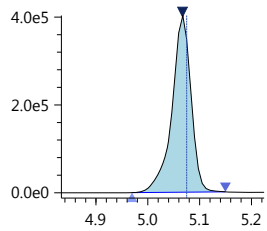


PFDS_1

Conc 10.0296

RT 5.067 Area 1026901

Q 599.00>79.90 (-) 4.04e5

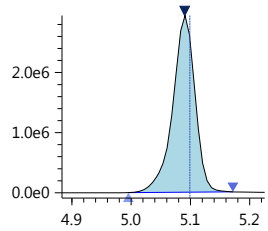


PFUnA

Conc 9.9709

RT 5.090 Area 7699196

Q 563.00>518.90 (-) 2.95e6

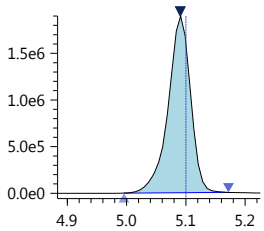


PFUnA-13C_IS

Conc 5.0000

RT 5.091 Area 4984787

ISTD 564.80>519.95 (-) 1.90e6

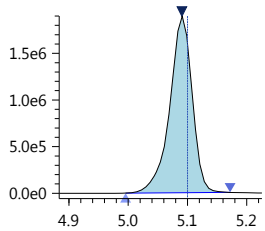


PFUnA-13C

Conc 4.9529

RT 5.091 Area 4984787

Q 564.80>519.95 (-) 1.90e6

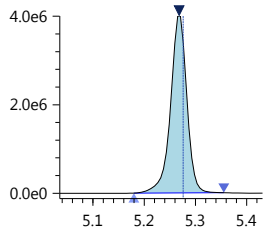


PFDoA

Conc 9.5970

RT 5.268 Area 8848985

Q 613.05>569.00 (-) 4.00e6

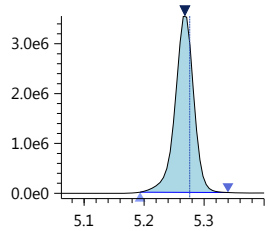


PFDoA-13C

Conc 5.2537

RT 5.268 Area 7701842

Q 614.80>569.95 (-) 3.56e6

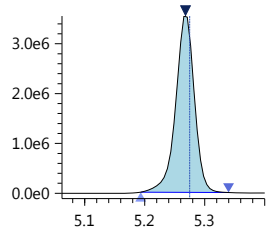


PFDoA-13C_IS

Conc 5.0000

RT 5.268 Area 7701842

ISTD 614.80>569.95 (-) 3.56e6

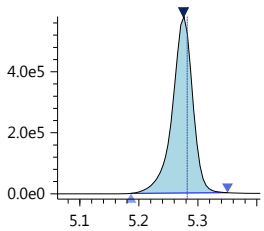


10_2-FtS_1

Conc 9.2561

RT 5.276 Area 1383241

Q 627.00>606.95 (-) 5.81e5

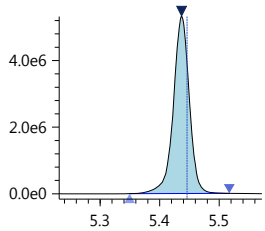


PFTrDA

Conc 9.9945

RT 5.437 Area 9940395

Q 663.00>618.90 (-) 5.32e6

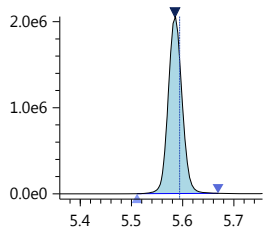


PFTeDA

Conc 9.9027

RT 5.585 Area 3862346

Q 713.40>669.00 (-) 2.06e6

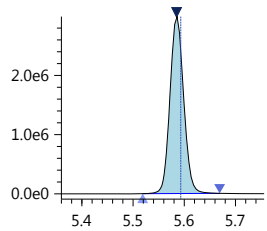


PFTeDA-13C

Conc 5.1304

RT 5.585 Area 5568717

Q 714.70>669.90 (-) 3.00e6

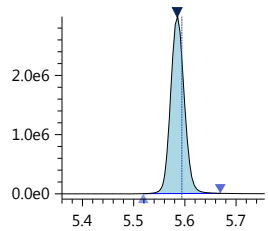


PFTeDA-13C_IS

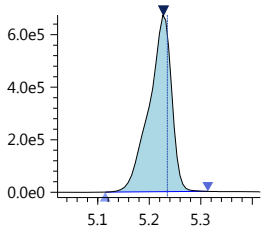
Conc 5.0000

RT 5.585 Area 5568717

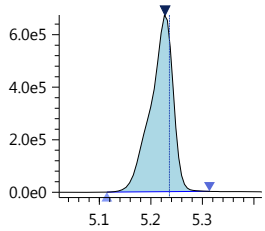
ISTD 714.70>669.90 (-) 3.00e6



FOSA-13C_IS
Conc 5.0000
RT 5.228 Area 2033580
ISTD 506.00>78.05 (-) 6.75e5



FOSA-13C
Conc 5.4008
RT 5.228 Area 2033580
Q 506.00>78.05 (-) 6.75e5



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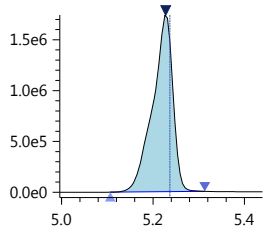
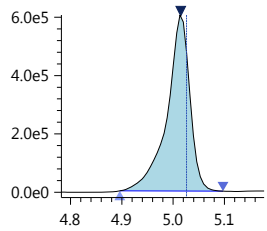
Conc 9.9714
RT 5.228 Area 5330704
Q 498.20>78.00 (-) 1.74e6



N-MeFOSAA
Conc 10.7848
RT 5.015 Area 1859623
Q 570.20>419.00 (-) 6.08e5



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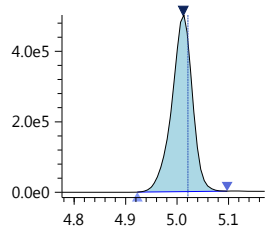
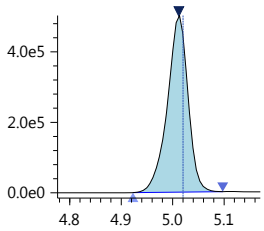
Conc 5.0891
RT 5.012 Area 1398330
Q 572.80>419.05 (-) 5.03e5



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.012 Area 1398330
ISTD 572.80>419.05 (-) 5.03e5



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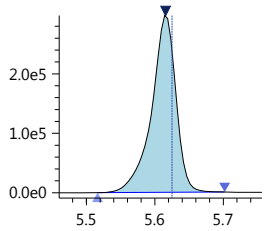
Conc 5.0000
RT 5.616 Area 733720
ISTD 514.90>168.90 (-) 2.98e5



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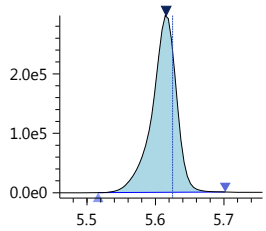
Conc 5.3622
RT 5.616 Area 733720
Q 514.90>168.90 (-) 2.98e5



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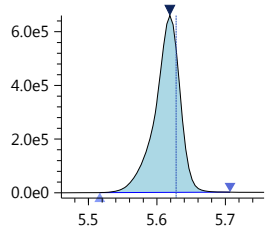
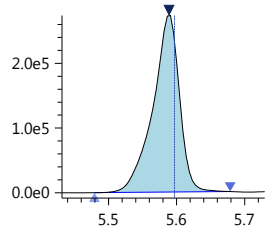
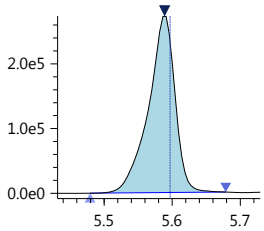
Conc 9.5450
RT 5.619 Area 1659273
Q 512.00>169.10 (-) 6.60e5



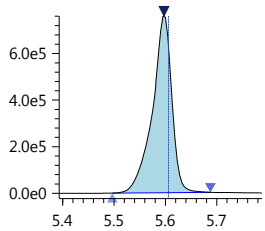
N-MeFOSE-d7
Conc 5.1166
RT 5.589 Area 740369
Q 622.70>59.10 (-) 2.74e5



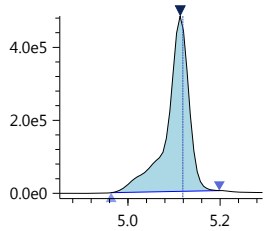
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.589 Area 740369
ISTD 622.70>59.10 (-) 2.74e5



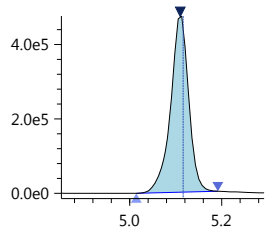
N-MeFOSE
Conc 10.3931
RT 5.597 Area 1987518
Q 616.00>59.00 (-) 7.61e5



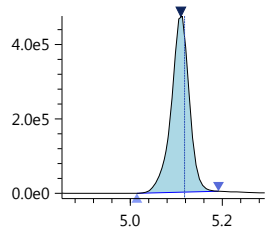
N-EtFOSAA
Conc 10.3236
RT 5.113 Area 1565849
Q 584.20>418.95 (-) 4.86e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.110 Area 1297351
ISTD 588.80>419.00 (-) 4.77e5



N-EtFOSAA-d5
Conc 4.7328
RT 5.110 Area 1297351
Q 588.80>419.00 (-) 4.77e5



N-EtFOSA-d9_IS
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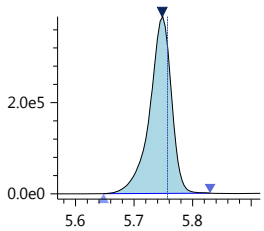
RT 5.748 Area 999220
ISTD 530.90>169.15 (-) 3.89e5



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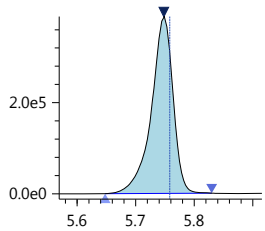
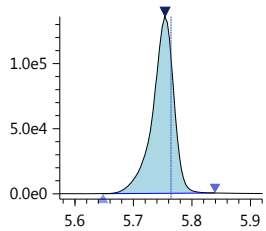
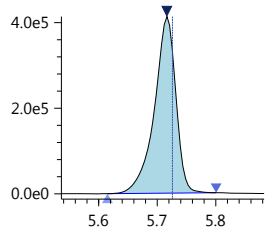
Conc 5.2740
RT 5.748 Area 999220
Q 530.90>169.15 (-) 3.89e5



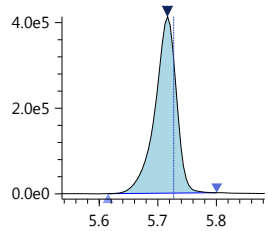
N-EtFOSA
Conc 10.2245
RT 5.754 Area 340537
Q 526.90>169.10 (-) 1.36e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.716 Area 1049424
ISTD 638.70>59.10 (-) 4.14e5



N-EtFOSE-d9
Conc 5.2544
RT 5.716 Area 1049424
Q 638.70>59.10 (-) 4.14e5

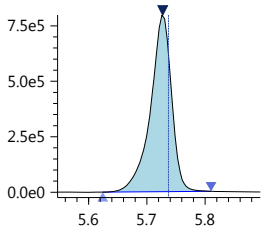


N-EtFOSE

Conc 10.1859

RT 5.727 Area 2002887

Q 630.00>58.90 (-) 7.99e5

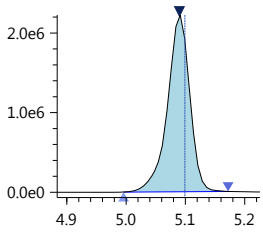


13C7-PFUnDA_IS

Conc 5.0000

RT 5.090 Area 5793010

ISTD 570.00>525.00 (-) 2.23e6

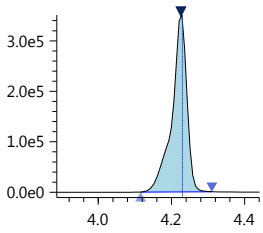


PFPeS

Conc 10.2335

RT 4.226 Area 986415

Q 349.00>99.00 (-) 3.51e5

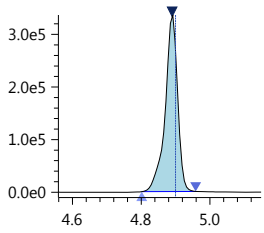


PFNS

Conc 9.7572

RT 4.890 Area 843875

Q 549.00>99.00 (-) 3.37e5



190301_013

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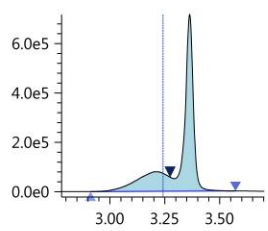
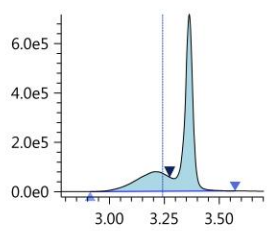
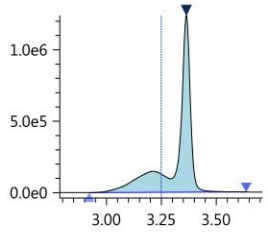
PFBA-13C_IS
Conc 5.0000
RT 3.274 Area 2691910
ISTD 216.90>172.15 (-) 7.18e5



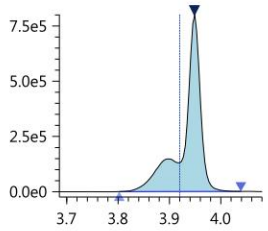
PFBA-13C
Conc 5.2181
RT 3.274 Area 2691910
Q 216.90>172.15 (-) 7.18e5



PFBA
Conc 9.7914
RT 3.364 Area 4992193
Q 213.00>169.10 (-) 1.24e6



PFPeA-13C_IS
Conc 5.0000
RT 3.949 Area 1799690
ISTD 267.90>223.00 (-) 8.02e5



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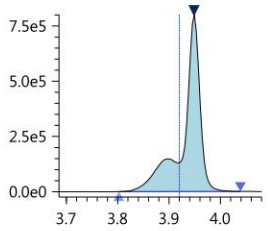
Conc 5.3817
RT 3.949 Area 1799690
Q 267.90>223.00 (-) 8.02e5



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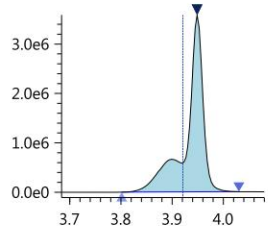
RT 3.949 Area 8028212
Q 263.05>219.10 (-) 3.59e6



PFBS_1
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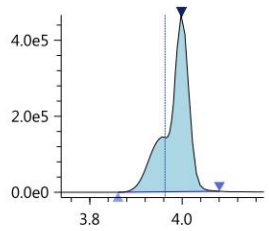
RT 3.999 Area 1448382
Q 299.00>80.00 (-) 4.67e5



PFBS-13C
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RT 4.000 Area 744361
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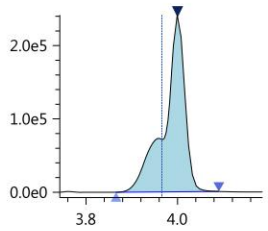

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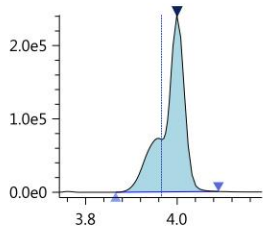
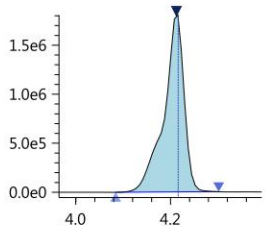


PFHxA-13C_IS
Conc 5.0000
RT 4.212 Area 5320094
ISTD 314.90>270.10 (-) 1.81e6



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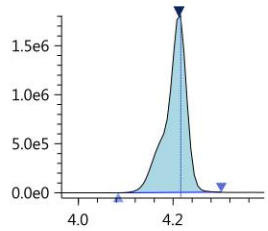

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Conc 8.3340
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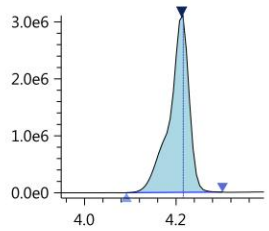
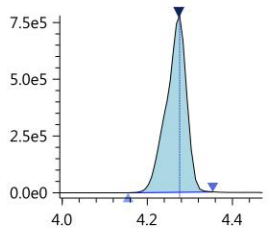


HPFO_DA
Conc 9.8744
RT 4.274 Area 2556829
Q 329.00>169.00 (-) 7.81e5



HFPO_DA-13C_IS
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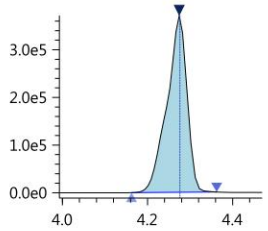
ISTD 332.00>286.80 (-) 3.72e5



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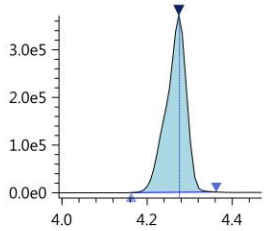
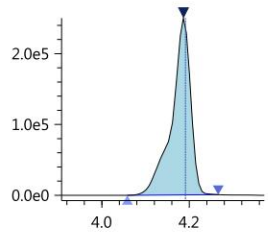


4_2-FTS-13C_IS
Conc 5.0000
RT 4.187 Area 739311
ISTD 328.80>309.05 (-) 2.50e5



4_2-FTS-13C
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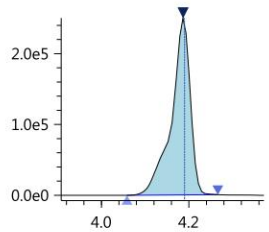
Q 328.80>309.05 (-) 2.50e5



4_2-FTS_1
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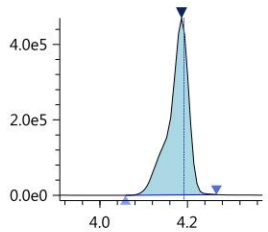
RT 4.187 Area 1415356
Q 327.00>307.05 (-) 4.70e5



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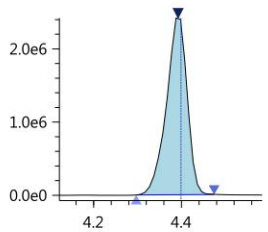
RT 4.392 Area 7959697
Q 362.90>319.00 (-) 2.42e6



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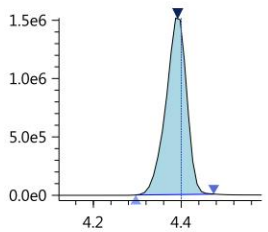
ISTD 366.90>322.10 (-) 1.52e6



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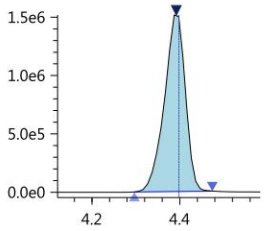
RT 4.392 Area 5037007
Q 366.90>322.10 (-) 1.52e6



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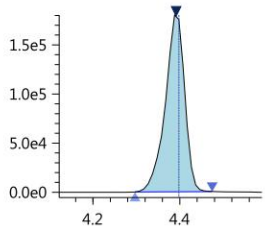
ISTD 402.70>84.05 (-) 1.80e5



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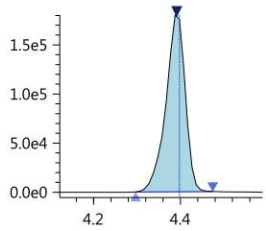
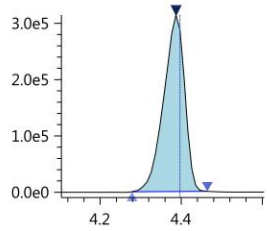
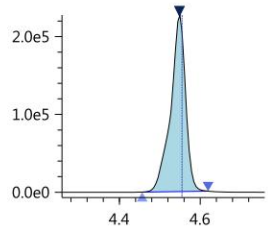
Q 402.70>84.05 (-) 1.80e5



PFHxS_1
Conc 9.7096
RT 4.387 Area 1130996
Q 399.00>80.00 (-) 3.15e5



6_2-FTS-13C
Conc 4.8775
RT 4.549 Area 580959
Q 428.90>409.00 (-) 2.28e5



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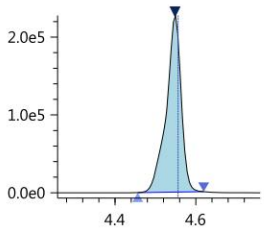

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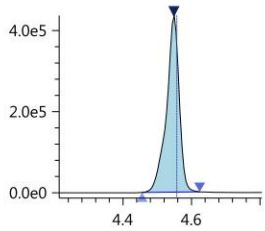
RT 4.549 Area 1121286
Q 427.00>407.00 (-) 4.37e5



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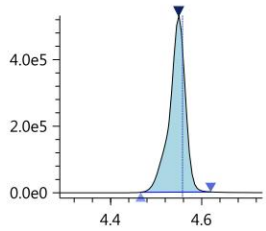
Q 449.00>80.15 (-) 5.32e5



PFOA-13C_IS
Conc 5.0000
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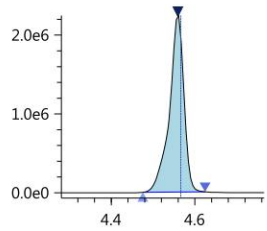

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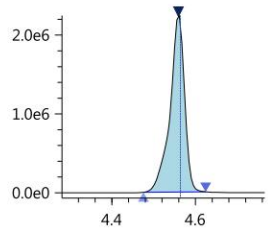
Q 416.80>372.05 (-) 2.25e6



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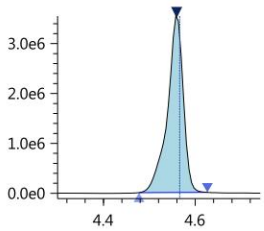
Q 413.00>369.00 (-) 3.55e6



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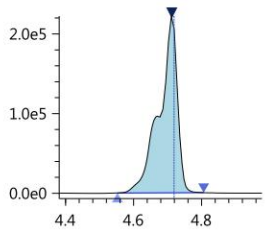
Q 499.00>80.00 (-) 2.22e5



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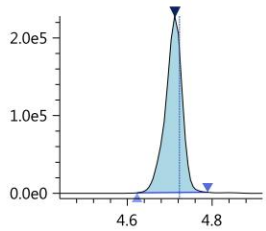
RT 4.712 Area 617822
ISTD 502.80>80.05 (-) 2.28e5



PFOS-13C
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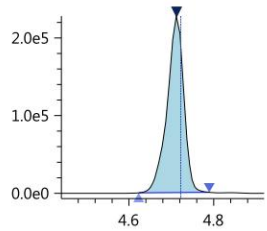
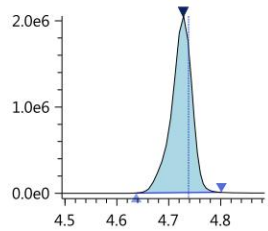
Q 502.80>80.05 (-) 2.28e5



PFNA-13C_IS
Conc 5.0000
RT 4.728 Area 5597580
ISTD 467.80>423.00 (-) 2.05e6



PFNA-13C
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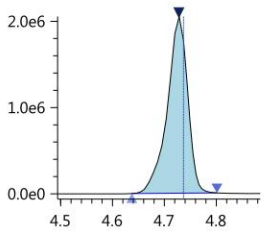
RT 4.728 Area 5597580
Q 467.80>423.00 (-) 2.05e6



PFNA
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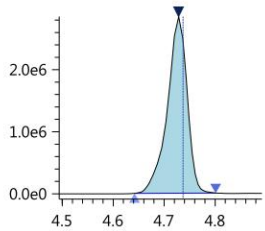
RT 4.728 Area 7658292
Q 463.00>418.90 (-) 2.86e6



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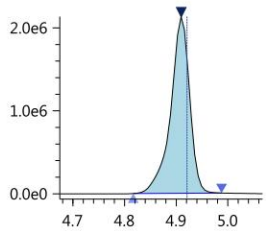

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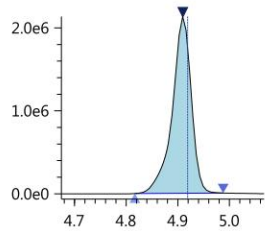
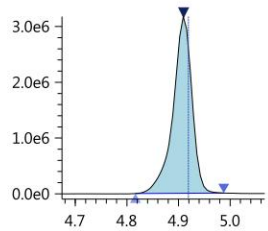
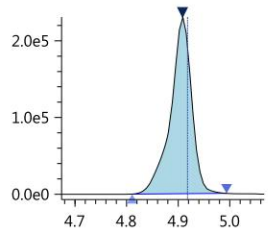


PFDA
Conc 9.0665
RT 4.910 Area 8078657
Q 513.00>468.80 (-) 3.18e6



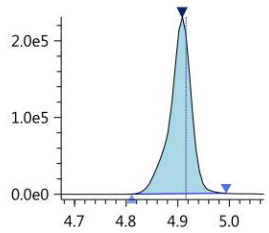
8_2-FTS-13C_IS

Conc 5.0000
RT 4.909 Area 649697
ISTD 528.80>509.00 (-) 2.31e5



8_2-FTS-13C

Conc 4.6752
RT 4.909 Area 649697
Q 528.80>509.00 (-) 2.31e5



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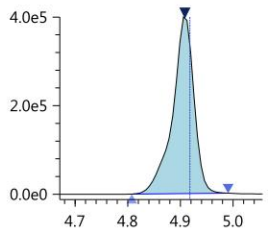
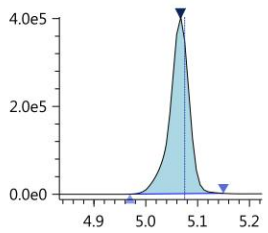
Conc 9.1589
RT 4.908 Area 1125239
Q 527.10>506.90 (-) 4.00e5



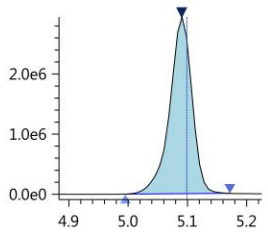
PFDS_1

Conc 10.6539
RT 5.067 Area 1026901
Q 599.00>79.90 (-) 4.04e5



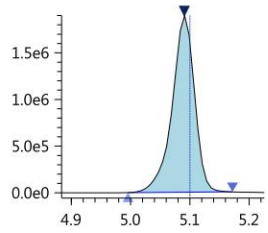
PFUnA

Conc 8.2920
RT 5.090 Area 7699196
Q 563.00>518.90 (-) 2.95e6



PFUnA-13C_IS

Conc 5.0000
RT 5.091 Area 4984787
ISTD 564.80>519.95 (-) 1.90e6



PFUnA-13C

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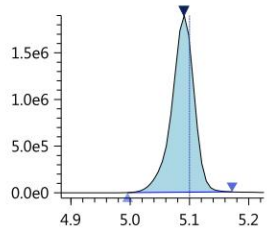
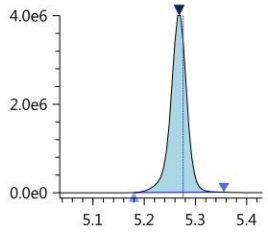
Q 564.80>519.95 (-) 1.90e6



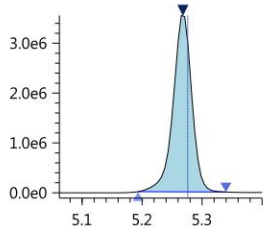
PFDoA

Conc 9.1916
RT 5.268 Area 8848985
Q 613.05>569.00 (-) 4.00e6



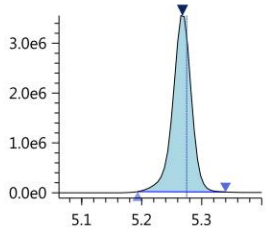
PFDoA-13C

Conc 5.2537
RT 5.268 Area 7701842
Q 614.80>569.95 (-) 3.56e6



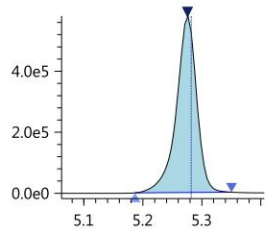
PFDoA-13C_IS

Conc 5.0000
RT 5.268 Area 7701842
ISTD 614.80>569.95 (-) 3.56e6



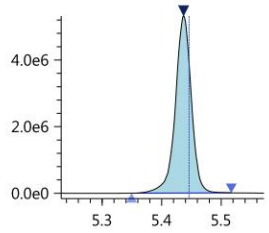
10_2-FtS_1

Conc 9.2561
RT 5.276 Area 1383241
Q 627.00>606.95 (-) 5.81e5



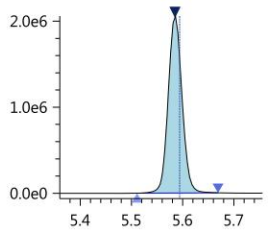
PFTrDA

Conc 9.3599
RT 5.437 Area 9940395
Q 663.00>618.90 (-) 5.32e6



PFTeDA

Conc 6.0313
RT 5.585 Area 3862346
Q 713.40>669.00 (-) 2.06e6



PFTeDA-13C

Conc 5.1304
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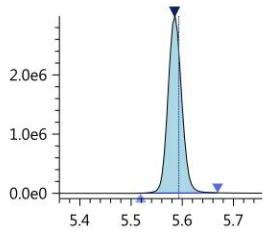
Q 714.70>669.90 (-) 3.00e6



PFTeDA-13C_IS

Conc 5.0000
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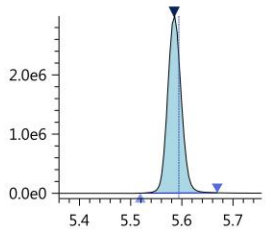
ISTD 714.70>669.90 (-) 3.00e6



FOSA-13C_IS

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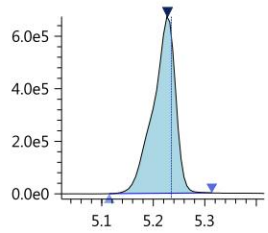
ISTD 506.00>78.05 (-) 6.75e5



FOSA-13C

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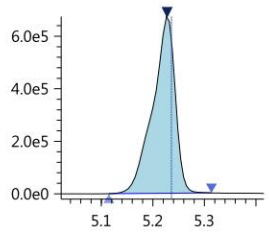
RT 5.228 Area 2033580
Q 506.00>78.05 (-) 6.75e5



FOSA

Conc 9.9714
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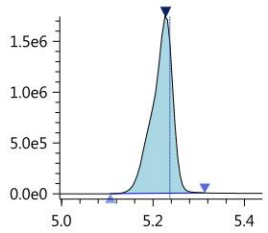
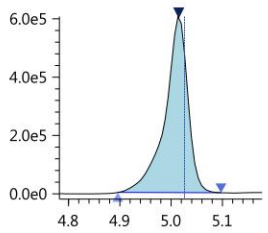
Q 498.20>78.00 (-) 1.74e6



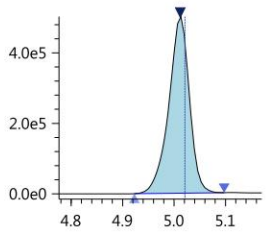
N-MeFOSAA

Conc 10.8853
RT 5.015 Area 1859623
Q 570.20>419.00 (-) 6.08e5



N-MeFOSAA-d3

Conc 5.0891
RT 5.012 Area 1398330
Q 572.80>419.05 (-) 5.03e5



N-MeFOSAA-d3_IS
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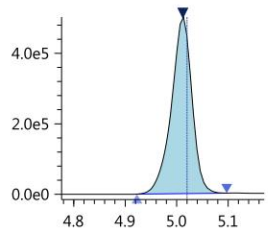
RT 5.012 Area 1398330
ISTD 572.80>419.05 (-) 5.03e5



N-MeFOSA-d3_IS
Conc 5.0000
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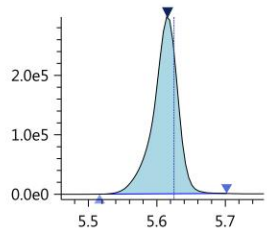
ISTD 514.90>168.90 (-) 2.98e5



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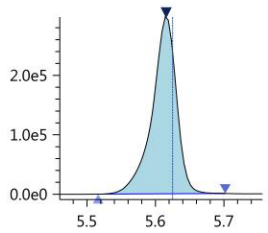

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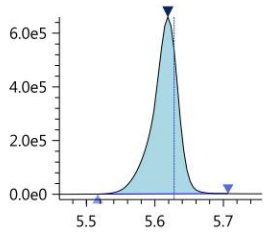
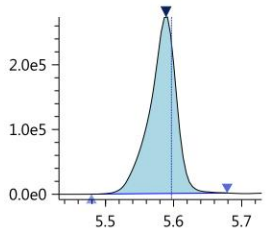
Conc 9.5450
RT 5.619 Area 1659273
Q 512.00>169.10 (-) 6.60e5



N-MeFOSE-d7
Conc 5.1166
RT 5.589 Area 740369
Q 622.70>59.10 (-) 2.74e5



N-MeFOSE-d7_IS
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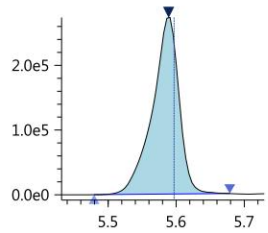
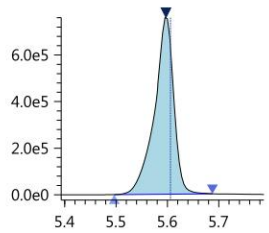
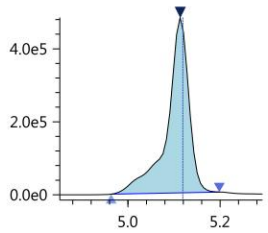
RT 5.589 Area 740369
ISTD 622.70>59.10 (-) 2.74e5



N-MeFOSE
Conc 10.3931
RT 5.597 Area 1987518
Q 616.00>59.00 (-) 7.61e5



N-EtFOSAA
Conc 10.1610
RT 5.113 Area 1565849
Q 584.20>418.95 (-) 4.86e5



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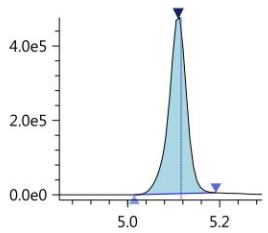
Conc 5.0000
RT 5.110 Area 1297351
ISTD 588.80>419.00 (-) 4.77e5



N-EtFOSAA-d5
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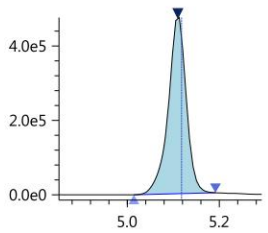
Q 588.80>419.00 (-) 4.77e5



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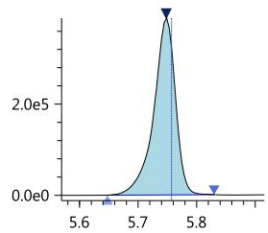
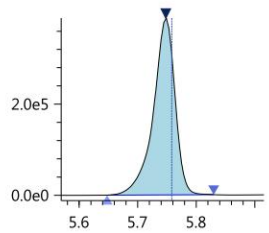
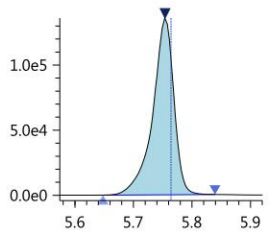
Conc 5.0000
RT 5.748 Area 999220
ISTD 530.90>169.15 (-) 3.89e5



N-EtFOSA-d9
Conc 5.2740
RT 5.748 Area 999220
Q 530.90>169.15 (-) 3.89e5



N-EtFOSA
Conc 10.3586
RT 5.754 Area 340537
Q 526.90>169.10 (-) 1.36e5



N-EtFOSE-d9_IS
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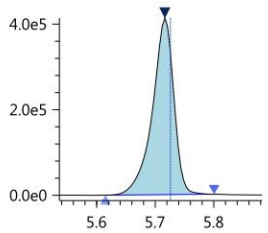

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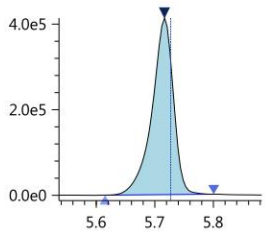

N-EtFOSE
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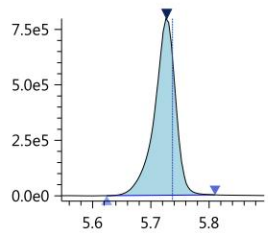
Q 630.00>58.90 (-) 7.99e5



13C7-PFUnDA_IS
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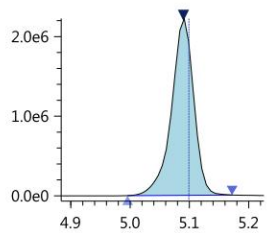
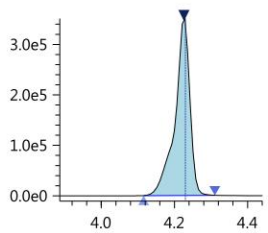
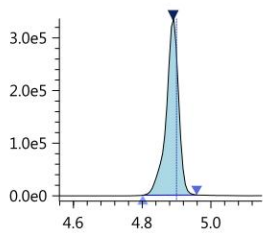
RT 5.090 Area 5793010
ISTD 570.00>525.00 (-) 2.23e6



PFPeS
Conc 10.3239
RT 4.226 Area 986415
Q 349.00>99.00 (-) 3.51e5



PFNS
Conc 9.8500
RT 4.890 Area 843875
Q 549.00>99.00 (-) 3.37e5



190301_014

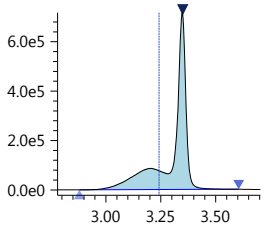
Sample ID: 15.0 PPB ICAL
Date acquired: 3/1/2019 5:40:23 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_014.lcd
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.350	2747430	2747430	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.350	2747430	5728997	26	5.3852	ng/mL	5.0000
PFBA	Auto	3.348	7501242	2747430	2	14.4151	ng/mL	15.0000
PFPeA-13C_IS	Auto	3.952	1777164	1777164	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.952	1777164	5728997	26	5.3737	ng/mL	5.0000
PFPeA	Auto	3.953	11838782	1777164	4	14.4102	ng/mL	15.0000
PFBS_1	Auto	4.002	2424076	813579	16	13.8838	ng/mL	13.3106
PFBS-13C	Auto	4.004	813579	5728997	26	5.4441	ng/mL	5.0000
PFBS-13C_IS	Auto	4.004	813579	813579	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.219	5553291	5553291	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.219	5553291	5728997	26	5.4452	ng/mL	5.0000
PFHxA	Auto	4.218	14114959	5553291	6	14.2148	ng/mL	15.0000
HPFO_DA	Auto	4.278	4140876	1177549	3	16.3866	ng/mL	15.0000
HFPO_DA-13C_IS	Auto	4.277	1177549	1177549	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.277	1177549	5728997	26	5.3175	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.193	708846	708846	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.193	708846	5728997	26	5.3236	ng/mL	5.0000
4_2-FTS_1	Auto	4.193	1980756	708846	5	12.0855	ng/mL	14.0583
PFHpA	Auto	4.397	12374786	5241001	8	14.9837	ng/mL	15.0000
PFHpA-13C_IS	Auto	4.397	5241001	5241001	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.397	5241001	5728997	26	4.9966	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.394	475982	475982	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.394	475982	5728997	26	4.6304	ng/mL	5.0000
PFHxS_1	Auto	4.392	1420175	475982	7	13.7097	ng/mL	13.6961
6_2-FTS-13C	Auto	4.551	562642	5728997	26	4.7765	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.551	562642	562642	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.551	1548345	601302	15	14.1979	ng/mL	14.2676
PFHpS_1	Auto	4.552	1911894	475982	7	16.3352	ng/mL	14.3016
PFOA-13C_IS	Auto	4.562	5151034	5151034	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.562	5151034	5728997	26	4.9268	ng/mL	5.0000
PFOA	Auto	4.562	12466616	5151034	9	14.6613	ng/mL	15.0000
PFOS_1	Auto	4.714	1268134	628680	13	14.8064	ng/mL	13.9384
PFOS-13C_IS	Auto	4.714	628680	628680	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.714	628680	5728997	26	5.1548	ng/mL	5.0000
PFNA-13C_IS	Auto	4.730	5833588	5833588	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.730	5833588	5728997	26	4.9748	ng/mL	5.0000
PFNA	Auto	4.730	12019101	5833588	11	15.1050	ng/mL	15.0000
PFDA-13C_IS	Auto	4.912	5591788	5591788	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.912	5591788	5728997	26	5.0550	ng/mL	5.0000
PFDA	Auto	4.912	12241379	5591788	12	13.4157	ng/mL	15.0000
8_2-FTS-13C_IS	Auto	4.912	601302	601302	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.912	601302	5728997	26	4.3753	ng/mL	5.0000
8_2-FTS_1	Auto	4.911	1523542	601302	15	13.2482	ng/mL	14.4007
PFDS_1	Auto	5.069	1517531	628680	13	14.5656	ng/mL	14.4700
PFUnA	Auto	5.093	11964720	5141394	14	15.0435	ng/mL	15.0000
PFUnA-13C_IS	Auto	5.093	5141394	5141394	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.093	5141394	5728997	26	5.1655	ng/mL	5.0000
PFDoA	Auto	5.270	12596691	7346020	17	14.3283	ng/mL	15.0000
PFDoA-13C	Auto	5.269	7346020	5728997	26	5.0669	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.269	7346020	7346020	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.278	1875255	601302	15	13.5584	ng/mL	14.4929
PFTrDA	Auto	5.438	14695150	5395969	22	15.2556	ng/mL	15.0000
PFTeDA	Auto	5.586	5557299	5395969	22	14.7722	ng/mL	15.0000
PFTeDA-13C	Auto	5.586	5395969	5728997	26	5.0268	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.586	5395969	5395969	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.230	1948046	1948046	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.230	1948046	5728997	26	5.2315	ng/mL	5.0000
FOSA	Auto	5.230	7661056	1948046	18	14.9596	ng/mL	15.0000
N-MeFOSAA	Auto	5.017	2556321	1387071	19	14.9455	ng/mL	15.0000
N-MeFOSAA-d3	Auto	5.015	1387071	5728997	26	5.1045	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.015	1387071	1387071	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.617	717320	717320	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.617	717320	5728997	26	5.3009	ng/mL	5.0000
N-MeFOSA	Auto	5.620	2474813	717320	1	14.5619	ng/mL	15.0000
N-MeFOSE-d7	Auto	5.591	729295	5728997	26	5.0964	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.591	729295	729295	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.599	2860665	729295	20	15.1862	ng/mL	15.0000

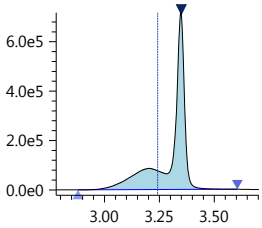
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.116	2325629	1202414	21	16.5434	ng/mL	15.0000
N-EtFOSAA-d5_IS	Auto	5.112	1202414	1202414	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.112	1202414	5728997	26	4.4355	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.750	1015116	1015116	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.750	1015116	5728997	26	5.4177	ng/mL	5.0000
N-EtFOSA	Auto	5.755	502349	1015116	23	14.8466	ng/mL	15.0000
N-EtFOSE-d9_IS	Auto	5.717	1046277	1046277	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.717	1046277	5728997	26	5.2972	ng/mL	5.0000
N-EtFOSE	Auto	5.728	2898073	1046277	24	14.7828	ng/mL	15.0000
13C7-PFUnDA_IS	Auto	5.092	5728997	5728997	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.232	1522118	813579	16	14.4476	ng/mL	14.1138
PFNS	Auto	4.892	1208567	628680	13	13.7326	ng/mL	14.4237

PFBA-13C_IS
Conc 5.0000
RT 3.350 Area 2747430
ISTD 216.90>172.15 (-) 7.18e5



PFBA-13C
Conc 5.3852
RT 3.350 Area 2747430
Q 216.90>172.15 (-) 7.18e5



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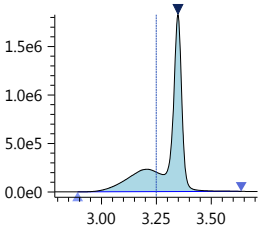
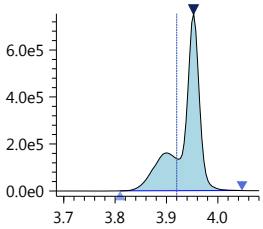
Conc 14.4151
RT 3.348 Area 7501242
Q 213.00>169.10 (-) 1.83e6



PFPeA-13C_IS
Conc 5.0000
RT 3.952 Area 1777164
ISTD 267.90>223.00 (-) 7.54e5



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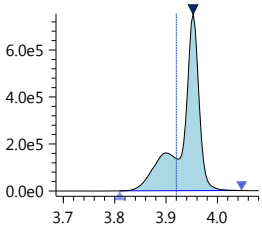
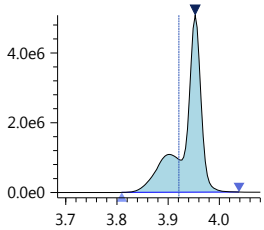
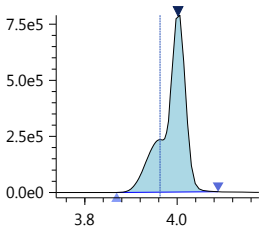
Conc 5.3737
RT 3.952 Area 1777164
Q 267.90>223.00 (-) 7.54e5



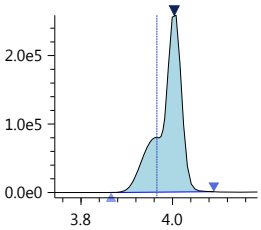
PFPeA
Conc 14.4102
RT 3.953 Area 11838782
Q 263.05>219.10 (-) 5.08e6



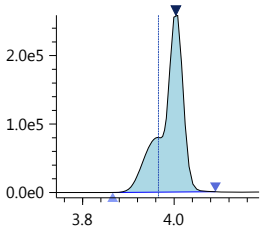
PFBS_1
Conc 13.8838
RT 4.002 Area 2424076
Q 299.00>80.00 (-) 7.90e5



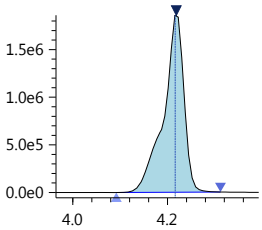
PFBS-13C
Conc 5.4441
RT 4.004 Area 813579
Q 301.80>80.00 (-) 2.59e5



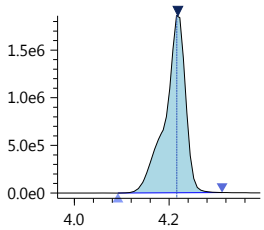
PFBS-13C_IS
Conc 5.0000
RT 4.004 Area 813579
ISTD 301.80>80.00 (-) 2.59e5



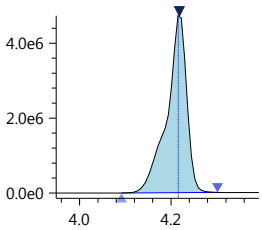
PFHxA-13C_IS
Conc 5.0000
RT 4.219 Area 5553291
ISTD 314.90>270.10 (-) 1.86e6



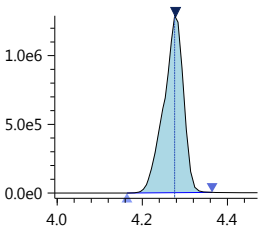
PFHxA-13C
Conc 5.4452
RT 4.219 Area 5553291
Q 314.90>270.10 (-) 1.86e6



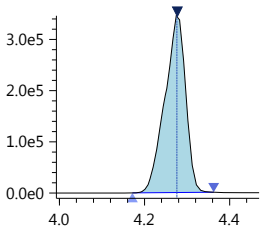
PFHxA
Conc 14.2148
RT 4.218 Area 14114959
Q 313.00>269.00 (-) 4.73e6



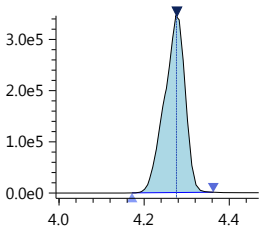
HPFO_DA
Conc 16.3866
RT 4.278 Area 4140876
Q 329.00>169.00 (-) 1.29e6



HFPO_DA-13C_IS
Conc 5.0000
RT 4.277 Area 1177549
ISTD 332.00>286.80 (-) 3.46e5



HFPO_DA-13C
Conc 5.3175
RT 4.277 Area 1177549
Q 332.00>286.80 (-) 3.46e5

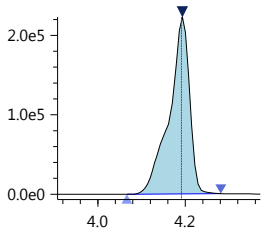


4_2-FTS-13C_IS

Conc 5.0000

RT 4.193 Area 708846

ISTD 328.80>309.05 (-) 2.23e5

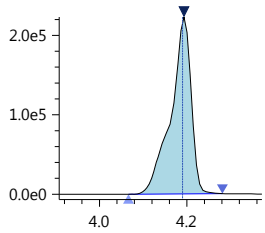


4_2-FTS-13C

Conc 5.3236

RT 4.193 Area 708846

Q 328.80>309.05 (-) 2.23e5

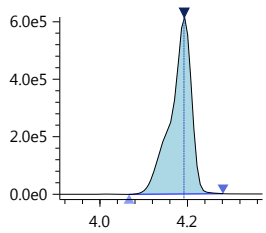


4_2-FTS_1

Conc 12.0855

RT 4.193 Area 1980756

Q 327.00>307.05 (-) 6.16e5

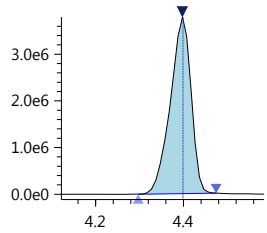


PFHpA

Conc 14.9837

RT 4.397 Area 12374786

Q 362.90>319.00 (-) 3.80e6

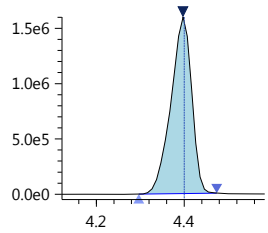


PFHpA-13C_IS

Conc 5.0000

RT 4.397 Area 5241001

ISTD 366.90>322.10 (-) 1.60e6

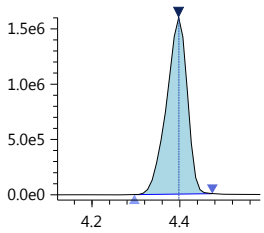


PFHpA-13C

Conc 4.9966

RT 4.397 Area 5241001

Q 366.90>322.10 (-) 1.60e6

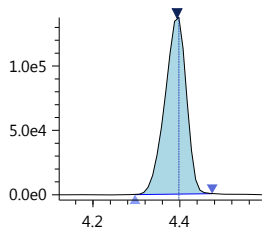


PFHxS-18O_IS

Conc 5.0000

RT 4.394 Area 475982

ISTD 402.70>84.05 (-) 1.38e5

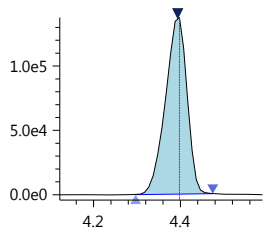


PFHxS-18O

Conc 4.6304

RT 4.394 Area 475982

Q 402.70>84.05 (-) 1.38e5

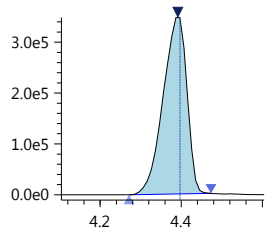


PFHxS_1

Conc 13.7097

RT 4.392 Area 1420175

Q 399.00>80.00 (-) 3.49e5

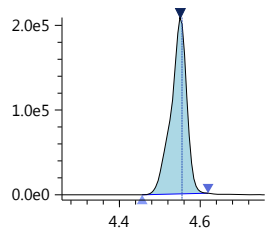


6_2-FTS-13C

Conc 4.7765

RT 4.551 Area 562642

Q 428.90>409.00 (-) 2.09e5

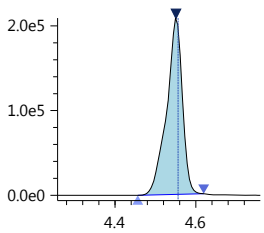


6_2-FTS-13C_IS

Conc 5.0000

RT 4.551 Area 562642

ISTD 428.90>409.00 (-) 2.09e5

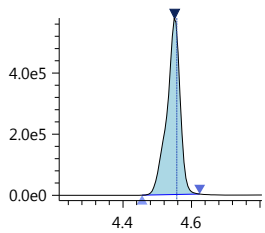


6_2-FTS_1

Conc 14.1979

RT 4.551 Area 1548345

Q 427.00>407.00 (-) 5.80e5

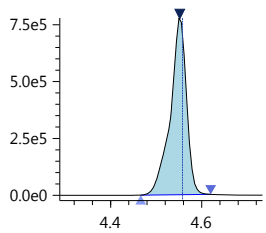


PFHpS_1

Conc 16.3352

RT 4.552 Area 1911894

Q 449.00>80.15 (-) 7.80e5

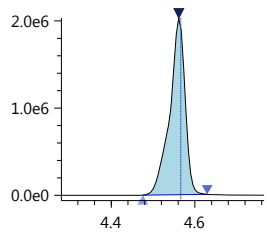


PFOA-13C_IS

Conc 5.0000

RT 4.562 Area 5151034

ISTD 416.80>372.05 (-) 2.03e6

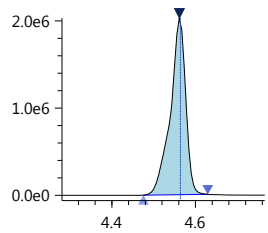


PFOA-13C

Conc 4.9268

RT 4.562 Area 5151034

Q 416.80>372.05 (-) 2.03e6

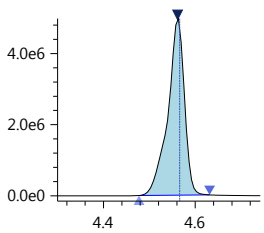


PFOA

Conc 14.6613

RT 4.562 Area 12466616

Q 413.00>369.00 (-) 4.99e6

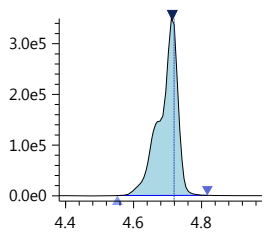


PFOS_1

Conc 14.8064

RT 4.714 Area 1268134

Q 499.00>80.00 (-) 3.50e5

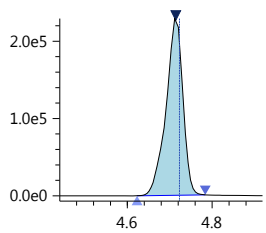


PFOS-13C_IS

Conc 5.0000

RT 4.714 Area 628680

ISTD 502.80>80.05 (-) 2.29e5

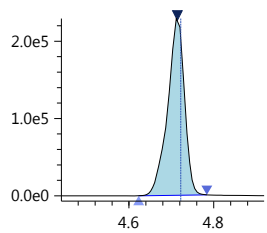


PFOS-13C

Conc 5.1548

RT 4.714 Area 628680

Q 502.80>80.05 (-) 2.29e5

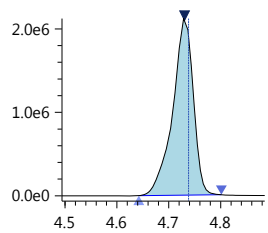


PFNA-13C_IS

Conc 5.0000

RT 4.730 Area 5833588

ISTD 467.80>423.00 (-) 2.12e6

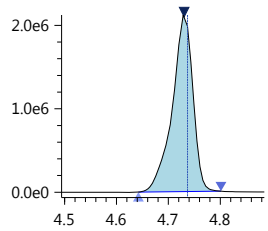


PFNA-13C

Conc 4.9748

RT 4.730 Area 5833588

Q 467.80>423.00 (-) 2.12e6

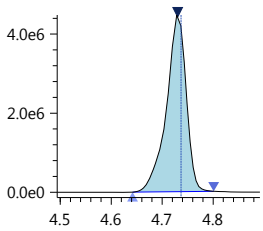


PFNA

Conc 15.1050

RT 4.730 Area 12019101

Q 463.00>418.90 (-) 4.48e6

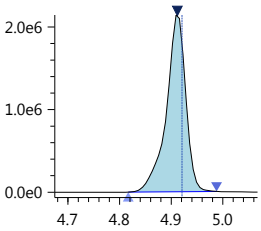


PFDA-13C_IS

Conc 5.0000

RT 4.912 Area 5591788

ISTD 514.80>469.95 (-) 2.15e6

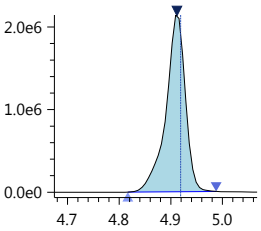


PFDA-13C

Conc 5.0550

RT 4.912 Area 5591788

Q 514.80>469.95 (-) 2.15e6

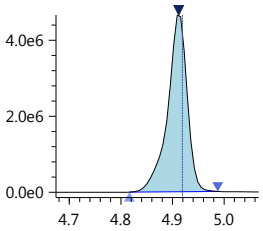


PFDA

Conc 13.4157

RT 4.912 Area 12241379

Q 513.00>468.80 (-) 4.67e6

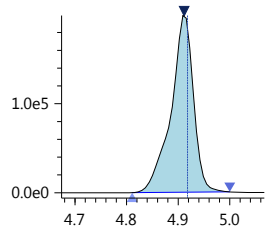


8_2-FTS-13C_IS

Conc 5.0000

RT 4.912 Area 601302

ISTD 528.80>509.00 (-) 1.99e5

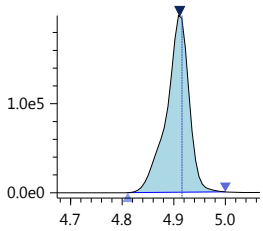


8_2-FTS-13C

Conc 4.3753

RT 4.912 Area 601302

Q 528.80>509.00 (-) 1.99e5

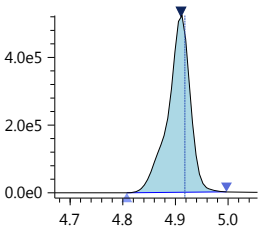


8_2-FTS_1

Conc 13.2482

RT 4.911 Area 1523542

Q 527.10>506.90 (-) 5.24e5

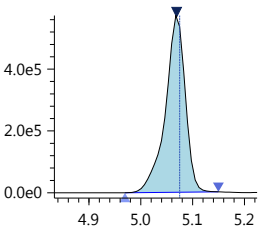


PFDS_1

Conc 14.5656

RT 5.069 Area 1517531

Q 599.00>79.90 (-) 5.73e5

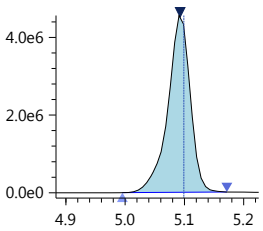


PFUnA

Conc 15.0435

RT 5.093 Area 11964720

Q 563.00>518.90 (-) 4.56e6

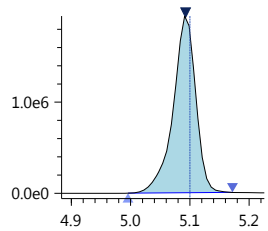


PFUnA-13C_IS

Conc 5.0000

RT 5.093 Area 5141394

ISTD 564.80>519.95 (-) 1.95e6

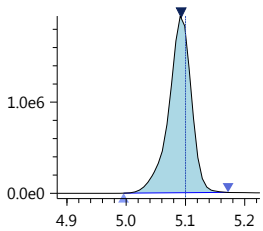


PFUnA-13C

Conc 5.1655

RT 5.093 Area 5141394

Q 564.80>519.95 (-) 1.95e6

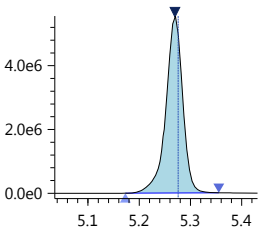


PFDoA

Conc 14.3283

RT 5.270 Area 12596691

Q 613.05>569.00 (-) 5.56e6

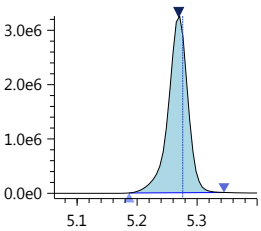


PFDoA-13C

Conc 5.0669

RT 5.269 Area 7346020

Q 614.80>569.95 (-) 3.26e6

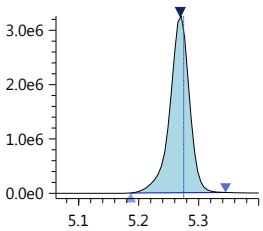


PFDoA-13C_IS

Conc 5.0000

RT 5.269 Area 7346020

ISTD 614.80>569.95 (-) 3.26e6

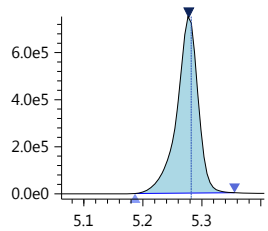


10_2-FtS_1

Conc 13.5584

RT 5.278 Area 1875255

Q 627.00>606.95 (-) 7.53e5

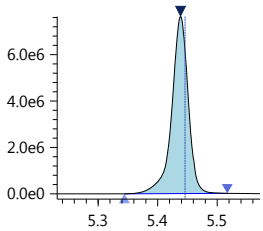


PFTrDA

Conc 15.2556

RT 5.438 Area 14695150

Q 663.00>618.90 (-) 7.64e6

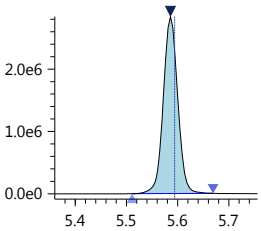


PFTeDA

Conc 14.7722

RT 5.586 Area 5557299

Q 713.40>669.00 (-) 2.84e6

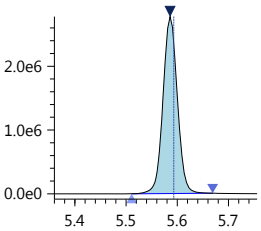


PFTeDA-13C

Conc 5.0268

RT 5.586 Area 5395969

Q 714.70>669.90 (-) 2.78e6

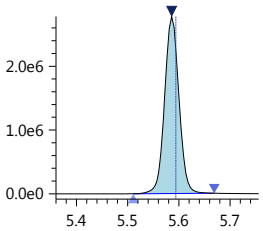


PFTeDA-13C_IS

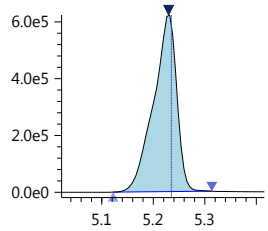
Conc 5.0000

RT 5.586 Area 5395969

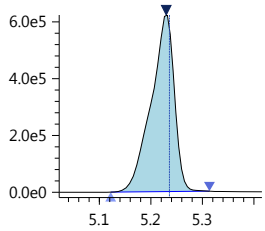
ISTD 714.70>669.90 (-) 2.78e6



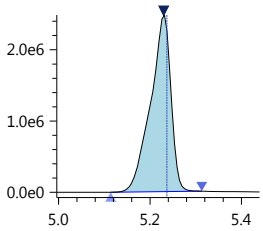
FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1948046
ISTD 506.00>78.05 (-) 6.24e5



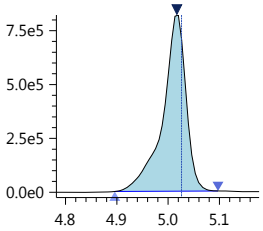
FOSA-13C
Conc 5.2315
RT 5.230 Area 1948046
Q 506.00>78.05 (-) 6.24e5



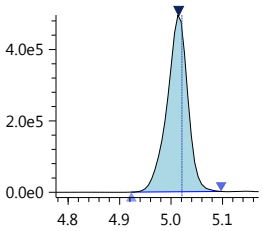
FOSA
Conc 14.9596
RT 5.230 Area 7661056
Q 498.20>78.00 (-) 2.49e6



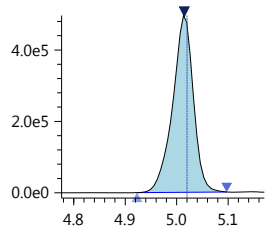
N-MeFOSAA
Conc 14.9455
RT 5.017 Area 2556321
Q 570.20>419.00 (-) 8.23e5



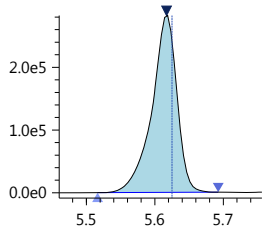
N-MeFOSAA-d3
Conc 5.1045
RT 5.015 Area 1387071
Q 572.80>419.05 (-) 4.97e5



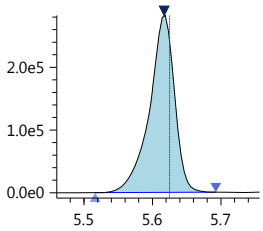
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.015 Area 1387071
ISTD 572.80>419.05 (-) 4.97e5



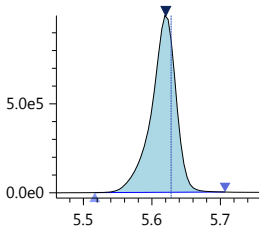
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.617 Area 717320
ISTD 514.90>168.90 (-) 2.83e5



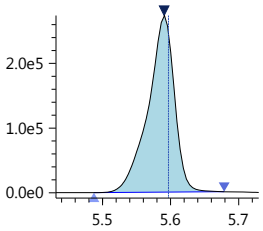
N-MeFOSA-d3
Conc 5.3009
RT 5.617 Area 717320
Q 514.90>168.90 (-) 2.83e5



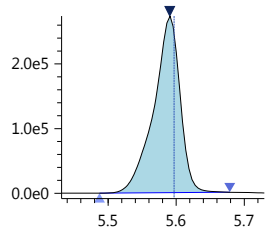
N-MeFOSA
Conc 14.5619
RT 5.620 Area 2474813
Q 512.00>169.10 (-) 9.97e5



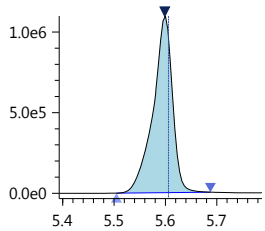
N-MeFOSE-d7
Conc 5.0964
RT 5.591 Area 729295
Q 622.70>59.10 (-) 2.74e5



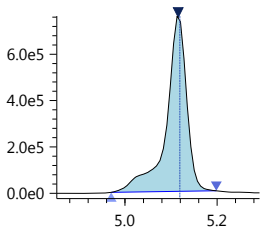
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.591 Area 729295
ISTD 622.70>59.10 (-) 2.74e5



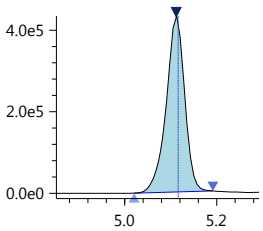
N-MeFOSE
Conc 15.1862
RT 5.599 Area 2860665
Q 616.00>59.00 (-) 1.10e6



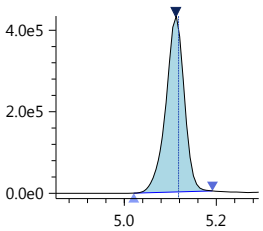
N-EtFOSAA
Conc 16.5434
RT 5.116 Area 2325629
Q 584.20>418.95 (-) 7.65e5



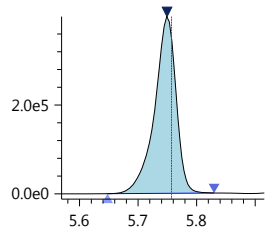
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.112 Area 1202414
ISTD 588.80>419.00 (-) 4.35e5



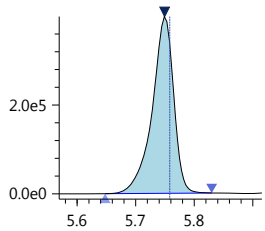
N-EtFOSAA-d5
Conc 4.4355
RT 5.112 Area 1202414
Q 588.80>419.00 (-) 4.35e5



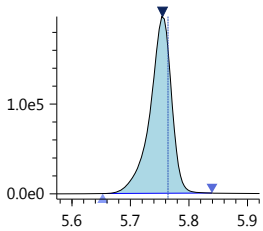
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.750 Area 1015116
ISTD 530.90>169.15 (-) 3.99e5



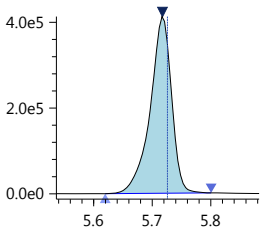
N-EtFOSA-d9
Conc 5.4177
RT 5.750 Area 1015116
Q 530.90>169.15 (-) 3.99e5



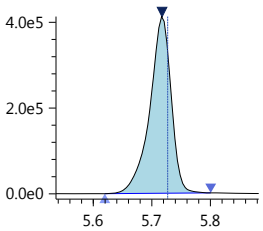
N-EtFOSA
Conc 14.8466
RT 5.755 Area 502349
Q 526.90>169.10 (-) 1.98e5



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.717 Area 1046277
ISTD 638.70>59.10 (-) 4.14e5



N-EtFOSE-d9
Conc 5.2972
RT 5.717 Area 1046277
Q 638.70>59.10 (-) 4.14e5

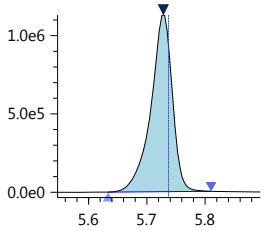


N-EtFOSE

Conc 14.7828

RT 5.728 Area 2898073

Q 630.00>58.90 (-) 1.13e6

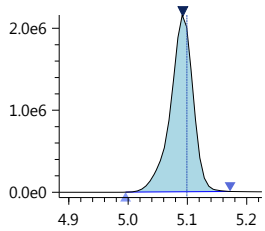


13C7-PFUnDA_IS

Conc 5.0000

RT 5.092 Area 5728997

ISTD 570.00>525.00 (-) 2.16e6

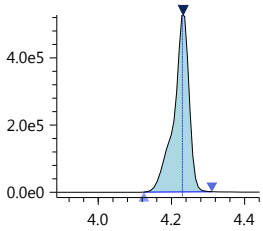


PFPeS

Conc 14.4476

RT 4.232 Area 1522118

Q 349.00>99.00 (-) 5.27e5

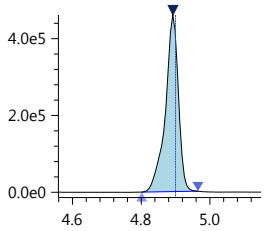


PFNS

Conc 13.7326

RT 4.892 Area 1208567

Q 549.00>99.00 (-) 4.62e5



190301_014

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Date acquired: 3/1/2019 5:40:23 PM
Acquired by: System Administrator
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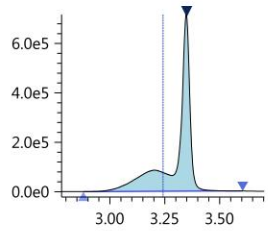
Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.350 Area 2747430
ISTD 216.90>172.15 (-) 7.18e5



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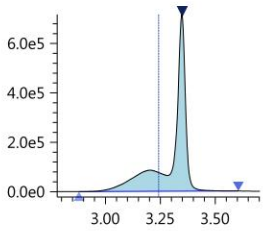
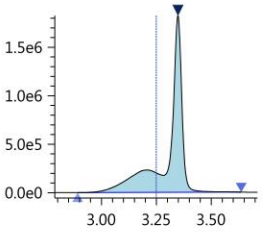
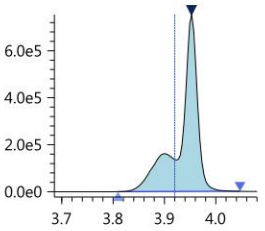
Conc 5.3852
RT 3.350 Area 2747430
Q 216.90>172.15 (-) 7.18e5



PFBA
Conc 14.4151
RT 3.348 Area 7501242
Q 213.00>169.10 (-) 1.83e6



PFPeA-13C_IS
Conc 5.0000
RT 3.952 Area 1777164
ISTD 267.90>223.00 (-) 7.54e5



PFPeA-13C
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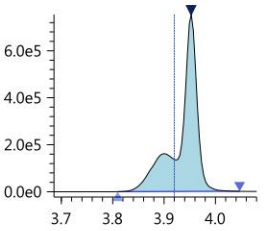
RT 3.952 Area 1777164
Q 267.90>223.00 (-) 7.54e5



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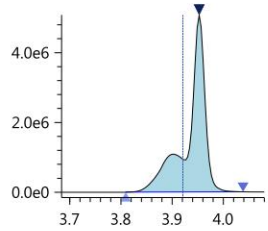
RT 3.953 Area 11838782
Q 263.05>219.10 (-) 5.08e6



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Conc 14.8039
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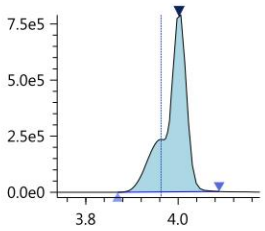
Q 299.00>80.00 (-) 7.90e5



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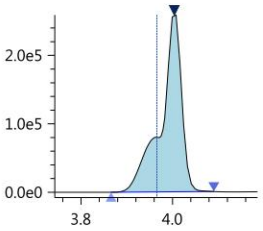
Q 301.80>80.00 (-) 2.59e5



PFBS-13C_IS
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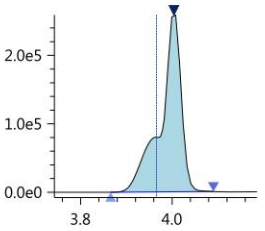
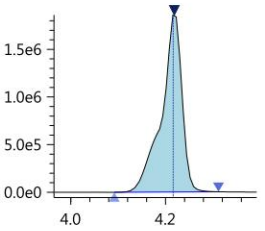
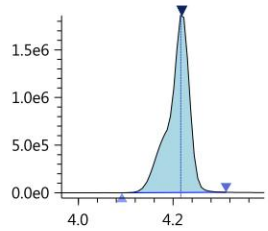


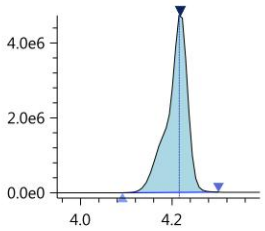
PFHxA-13C_IS
Conc 5.0000
RT 4.219 Area 5553291
ISTD 314.90>270.10 (-) 1.86e6



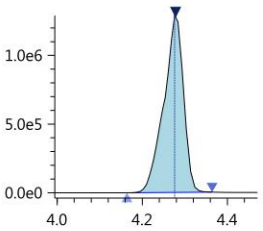
PFHxA-13C
Conc 5.4452
RT 4.219 Area 5553291
Q 314.90>270.10 (-) 1.86e6



PFHxA
Conc 12.2710
RT 4.218 Area 14114959
Q 313.00>269.00 (-) 4.73e6



HPFO_DA
Conc 16.3866
RT 4.278 Area 4140876
Q 329.00>169.00 (-) 1.29e6



HFPO_DA-13C_IS
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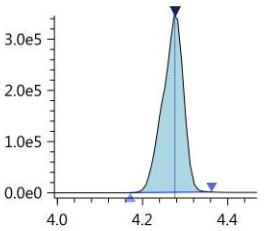

HFPO_DA-13C
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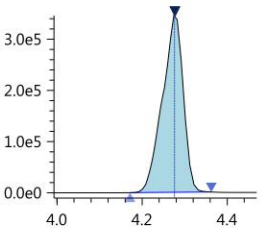
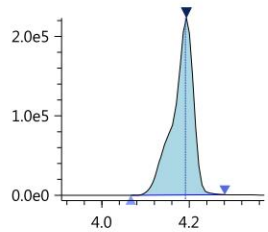
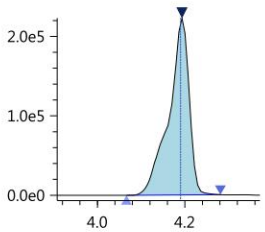
Q 332.00>286.80 (-) 3.46e5



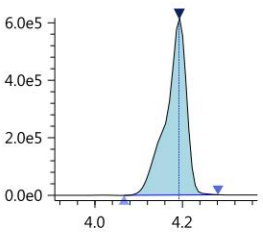
4_2-FTS-13C_IS
Conc 5.0000
RT 4.193 Area 708846
ISTD 328.80>309.05 (-) 2.23e5



4_2-FTS-13C
Conc 5.3236
RT 4.193 Area 708846
Q 328.80>309.05 (-) 2.23e5



4_2-FTS_1
Conc 12.2357
RT 4.193 Area 1980756
Q 327.00>307.05 (-) 6.16e5



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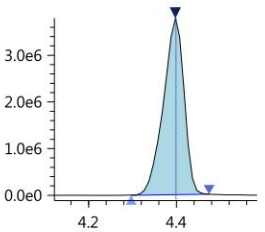
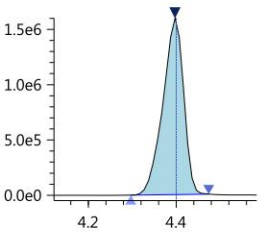
Q 362.90>319.00 (-) 3.80e6



PFHpA-13C_IS
Conc 5.0000
RT 4.397 Area 5241001
ISTD 366.90>322.10 (-) 1.60e6



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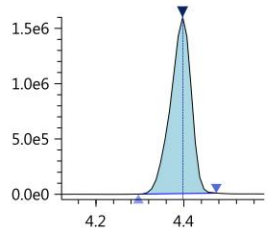
Q 366.90>322.10 (-) 1.60e6



PFHxS-18O_IS
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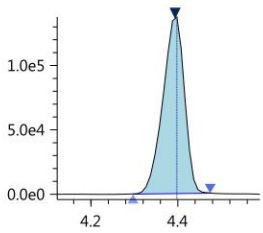
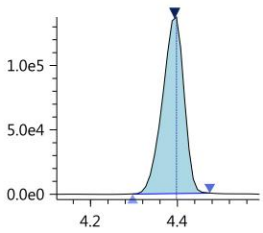
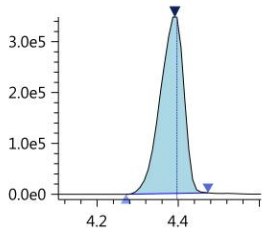
RT 4.394 Area 475982
ISTD 402.70>84.05 (-) 1.38e5



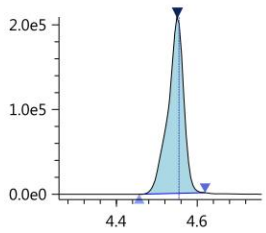
PFHxS-18O
Conc 4.6304
RT 4.394 Area 475982
Q 402.70>84.05 (-) 1.38e5



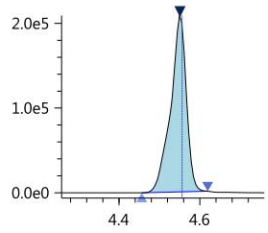
PFHxS_1
Conc 14.3593
RT 4.392 Area 1420175
Q 399.00>80.00 (-) 3.49e5



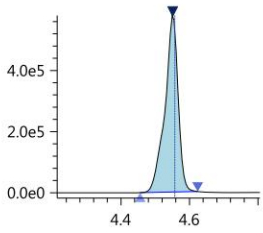
6_2-FTS-13C
Conc 4.7765
RT 4.551 Area 562642
Q 428.90>409.00 (-) 2.09e5



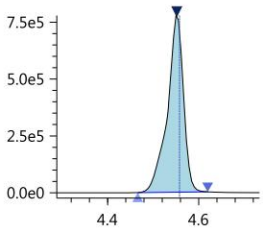
6_2-FTS-13C_IS
Conc 5.0000
RT 4.551 Area 562642
ISTD 428.90>409.00 (-) 2.09e5



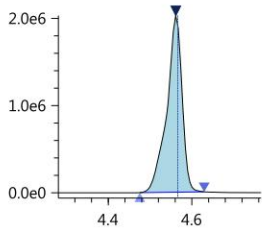
6_2-FTS_1
Conc 13.3528
RT 4.551 Area 1548345
Q 427.00>407.00 (-) 5.80e5



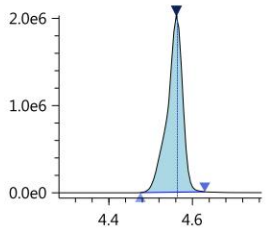
PFHpS_1
Conc 16.3352
RT 4.552 Area 1911894
Q 449.00>80.15 (-) 7.80e5



PFOA-13C_IS
Conc 5.0000
RT 4.562 Area 5151034
ISTD 416.80>372.05 (-) 2.03e6



PFOA-13C
Conc 4.9268
RT 4.562 Area 5151034
Q 416.80>372.05 (-) 2.03e6



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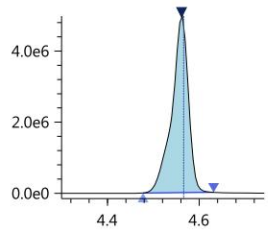
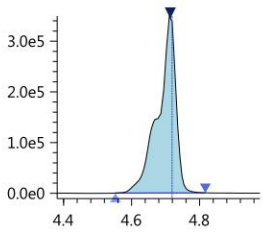
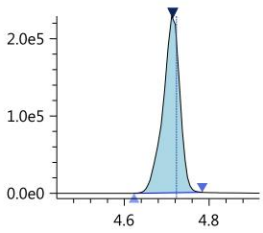
Conc 13.1463
RT 4.562 Area 12466616
Q 413.00>369.00 (-) 4.99e6



PFOS_1
Conc 14.9329
RT 4.714 Area 1268134
Q 499.00>80.00 (-) 3.50e5



PFOS-13C_IS
Conc 5.0000
RT 4.714 Area 628680
ISTD 502.80>80.05 (-) 2.29e5



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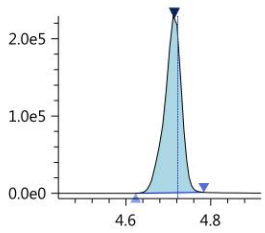
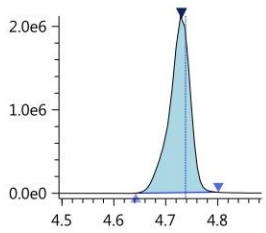
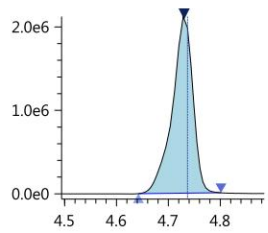
RT 4.714 Area 628680
Q 502.80>80.05 (-) 2.29e5



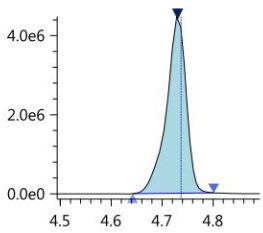
PFNA-13C_IS
Conc 5.0000
RT 4.730 Area 5833588
ISTD 467.80>423.00 (-) 2.12e6



PFNA-13C
Conc 4.9748
RT 4.730 Area 5833588
Q 467.80>423.00 (-) 2.12e6



PFNA
Conc 14.1407
RT 4.730 Area 12019101
Q 463.00>418.90 (-) 4.48e6



PFDA-13C_IS
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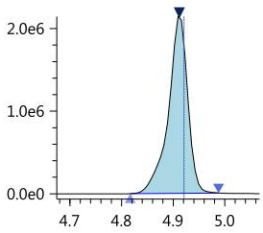

PFDA-13C
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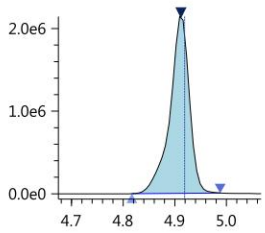

PFDA
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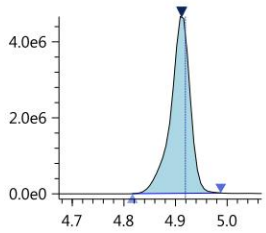
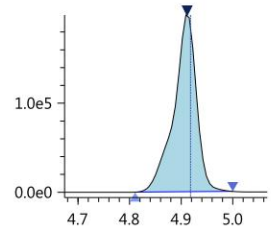
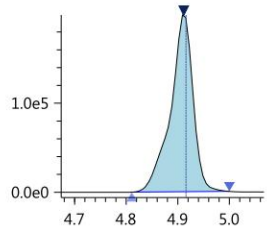


8_2-FTS-13C_IS
Conc 5.0000
RT 4.912 Area 601302
ISTD 528.80>509.00 (-) 1.99e5



8_2-FTS-13C
Conc 4.3753
RT 4.912 Area 601302
Q 528.80>509.00 (-) 1.99e5



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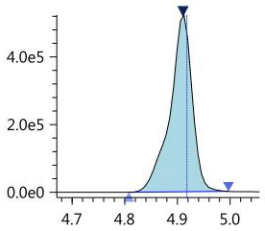
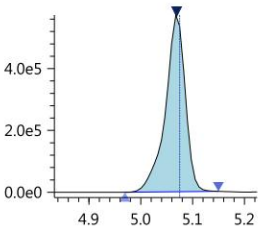
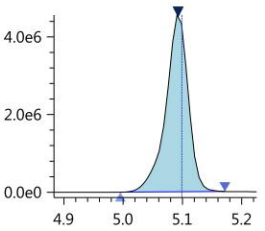
Conc 13.3990
RT 4.911 Area 1523542
Q 527.10>506.90 (-) 5.24e5



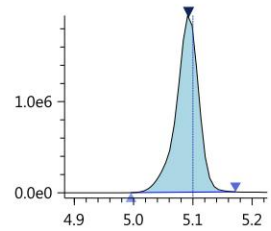
PFDS_1
Conc 15.4722
RT 5.069 Area 1517531
Q 599.00>79.90 (-) 5.73e5



PFUnA
Conc 12.4934
RT 5.093 Area 11964720
Q 563.00>518.90 (-) 4.56e6



PFUnA-13C_IS
Conc 5.0000
RT 5.093 Area 5141394
ISTD 564.80>519.95 (-) 1.95e6



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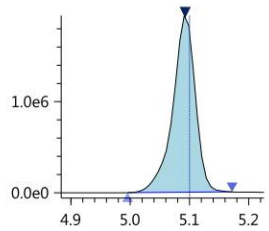

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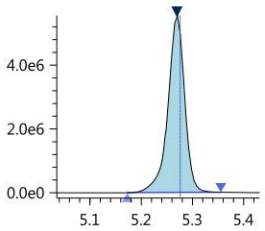
Conc 13.7181
RT 5.270 Area 12596691
Q 613.05>569.00 (-) 5.56e6



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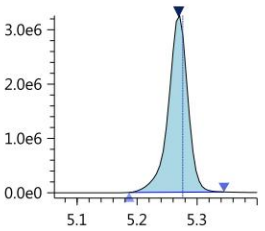
RT 5.269 Area 7346020
Q 614.80>569.95 (-) 3.26e6



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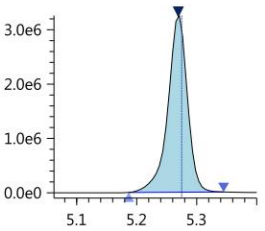
ISTD 614.80>569.95 (-) 3.26e6



10_2-FtS_1
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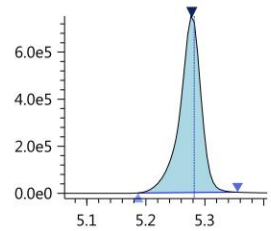
Q 627.00>606.95 (-) 7.53e5



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Conc 14.2800
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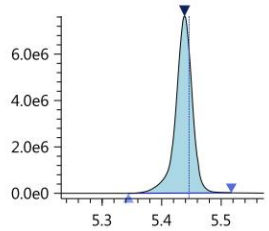
Q 663.00>618.90 (-) 7.64e6



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Conc 8.9559
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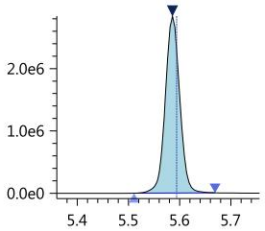
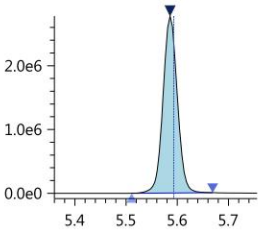
Q 713.40>669.00 (-) 2.84e6



PFTeDA-13C
Conc 5.0268
RT 5.586 Area 5395969
Q 714.70>669.90 (-) 2.78e6



PFTeDA-13C_IS
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RT 5.586 Area 5395969
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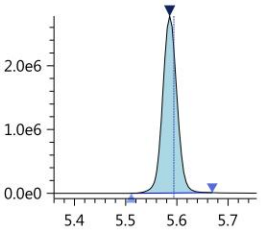

FOSA-13C_IS
Conc 5.0000
RT 5.230 Area 1948046
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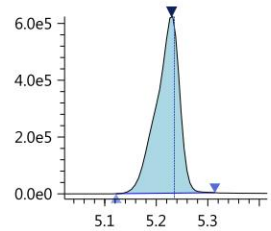

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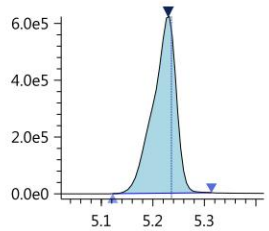

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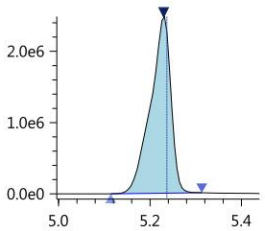
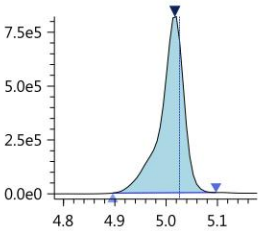
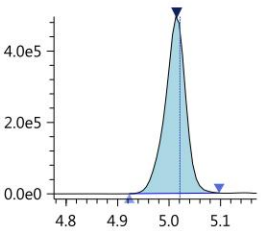


N-MeFOSAA
Conc 15.0849
RT 5.017 Area 2556321
Q 570.20>419.00 (-) 8.23e5



N-MeFOSAA-d3
Conc 5.1045
RT 5.015 Area 1387071
Q 572.80>419.05 (-) 4.97e5



N-MeFOSAA-d3_IS
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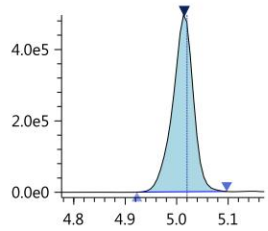
ISTD 572.80>419.05 (-) 4.97e5



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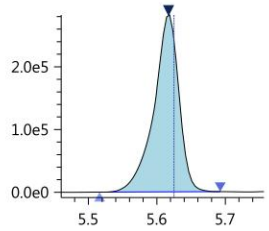
Conc 5.0000
RT 5.617 Area 717320
ISTD 514.90>168.90 (-) 2.83e5



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Conc 5.3009
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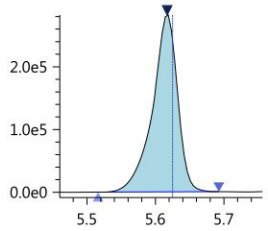
Q 514.90>168.90 (-) 2.83e5



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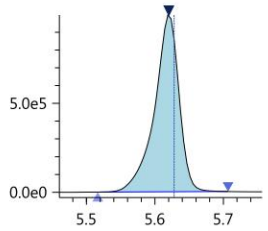
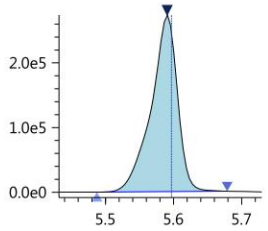
Q 512.00>169.10 (-) 9.97e5



N-MeFOSE-d7
Conc 5.0964
RT 5.591 Area 729295
Q 622.70>59.10 (-) 2.74e5



N-MeFOSE-d7_IS
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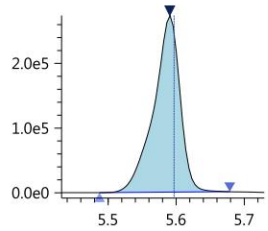
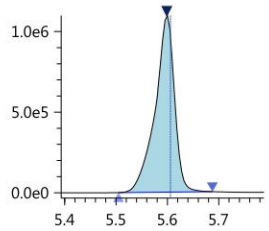
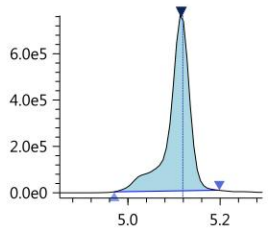
RT 5.591 Area 729295
ISTD 622.70>59.10 (-) 2.74e5



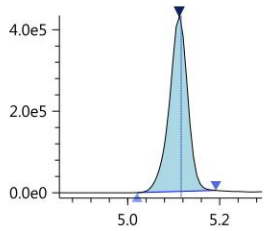
N-MeFOSE
Conc 15.1862
RT 5.599 Area 2860665
Q 616.00>59.00 (-) 1.10e6



N-EtFOSAA
Conc 16.2829
RT 5.116 Area 2325629
Q 584.20>418.95 (-) 7.65e5



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.112 Area 1202414
ISTD 588.80>419.00 (-) 4.35e5



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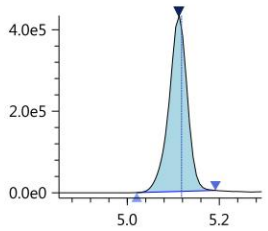
Q 588.80>419.00 (-) 4.35e5



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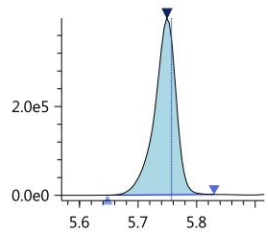
RT 5.750 Area 1015116
ISTD 530.90>169.15 (-) 3.99e5



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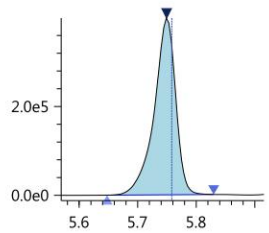
Q 530.90>169.15 (-) 3.99e5



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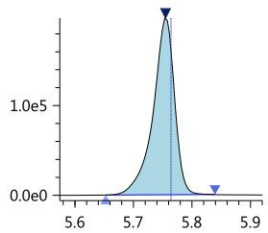
RT 5.755 Area 502349
Q 526.90>169.10 (-) 1.98e5



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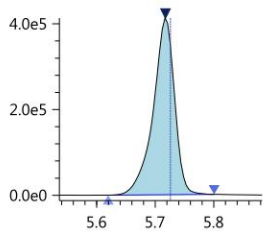
ISTD 638.70>59.10 (-) 4.14e5



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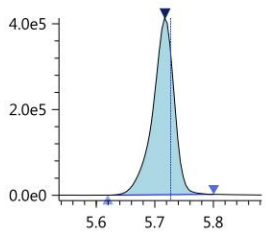
RT 5.717 Area 1046277
Q 638.70>59.10 (-) 4.14e5



N-EtFOSE
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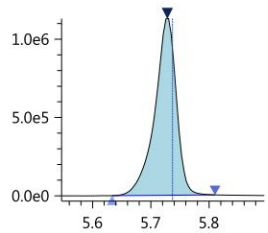
RT 5.728 Area 2898073
Q 630.00>58.90 (-) 1.13e6



13C7-PFUnDA_IS
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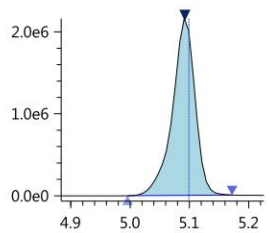
RT 5.092 Area 5728997
ISTD 570.00>525.00 (-) 2.16e6



PFPeS
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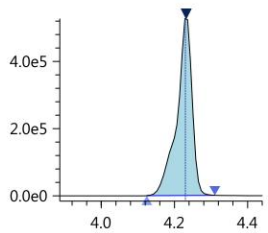
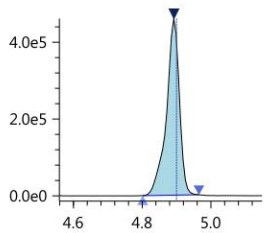
RT 4.232 Area 1522118
Q 349.00>99.00 (-) 5.27e5



PFNS
Conc 13.8631
RT 4.892 Area 1208567
Q 549.00>99.00 (-) 4.62e5



190301_015

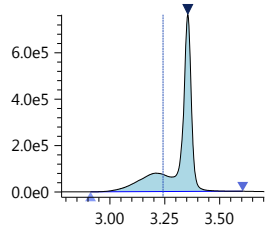
Sample ID: IB
Date acquired: 3/1/2019 5:50:51 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_015.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.355	2749315	2749315	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.355	2749315	6245690	26	4.9431	ng/mL	----
PFBA	ND(W/B)	----	----	2749315	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.954	1835287	1835287	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.954	1835287	6245690	26	5.0904	ng/mL	----
PFPeA	Auto	3.953	102759	1835287	4	-0.0046	ng/mL	----
PFBS_1	ND(W/B)	----	----	833990	16	----	ng/mL	----
PFBS-13C	Auto	4.006	833990	6245690	26	5.1190	ng/mL	----
PFBS-13C_IS	Auto	4.006	833990	833990	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.226	5863628	5863628	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.226	5863628	6245690	26	5.2738	ng/mL	----
PFHxA	M	4.202	32287	5863628	6	-0.0043	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1362900	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.286	1362900	1362900	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.286	1362900	6245690	26	5.6453	ng/mL	----
4_2-FTS-13C_IS	Auto	4.201	692242	692242	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.201	692242	6245690	26	4.7688	ng/mL	----
4_2-FTS_1	Auto	4.153	443	692242	5	0.0028	ng/mL	----
PFHpA	Auto	4.390	11533	5068651	8	-0.0254	ng/mL	----
PFHpA-13C_IS	Auto	4.404	5068651	5068651	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.404	5068651	6245690	26	4.4325	ng/mL	----
PFHxS-18O_IS	Auto	4.403	521174	521174	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.403	521174	6245690	26	4.6506	ng/mL	----
PFHxS_1	Auto	4.404	1410	521174	7	0.0124	ng/mL	----
6_2-FTS-13C	Auto	4.560	684786	6245690	26	5.3325	ng/mL	----
6_2-FTS-13C_IS	Auto	4.560	684786	684786	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.555	131	802467	15	0.0009	ng/mL	----
PFHpS_1	M	4.561	226	521174	7	0.0018	ng/mL	----
PFOA-13C_IS	Auto	4.569	6063066	6063066	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.569	6063066	6245690	26	5.3194	ng/mL	----
PFOA	M	4.558	26277	6063066	9	0.0010	ng/mL	----
PFOS_1	ND(W/B)	----	----	696841	13	----	ng/mL	----
PFOS-13C_IS	Auto	4.722	696841	696841	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.722	696841	6245690	26	5.2410	ng/mL	----
PFNA-13C_IS	Auto	4.738	7060720	7060720	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.738	7060720	6245690	26	5.5232	ng/mL	----
PFNA	M	4.715	18137	7060720	11	0.0020	ng/mL	----
PFDA-13C_IS	Auto	4.919	6504680	6504680	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.919	6504680	6245690	26	5.3938	ng/mL	----
PFDA	M	4.901	18716	6504680	12	0.0176	ng/mL	----
8_2-FTS-13C_IS	Auto	4.918	802467	802467	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.918	802467	6245690	26	5.3560	ng/mL	----
8_2-FTS_1	M	4.915	348	802467	15	0.0023	ng/mL	----
PFDS_1	ND(W/B)	----	----	696841	13	----	ng/mL	----
PFUnA	M	5.098	24237	5583950	14	-0.0121	ng/mL	----
PFUnA-13C_IS	Auto	5.099	5583950	5583950	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.099	5583950	6245690	26	5.1461	ng/mL	----
PFDoA	Auto	5.267	15823	7865833	17	0.0066	ng/mL	----
PFDoA-13C	Auto	5.276	7865833	6245690	26	4.9766	ng/mL	----
PFDoA-13C_IS	Auto	5.276	7865833	7865833	17	5.0000	ng/mL	----
10_2-FtS_1	Auto	5.282	378	802467	15	0.0020	ng/mL	----
PFTrDA	Auto	5.439	24863	6085488	22	0.0088	ng/mL	----
PFTeDA	Auto	5.592	56186	6085488	22	-0.0058	ng/mL	----
PFTeDA-13C	Auto	5.591	6085488	6245690	26	5.2001	ng/mL	----
PFTeDA-13C_IS	Auto	5.591	6085488	6085488	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.237	2071697	2071697	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.237	2071697	6245690	26	5.1033	ng/mL	----
FOSA	M	5.237	3787	2071697	18	0.0070	ng/mL	----
N-MeFOSAA	Auto	5.022	9888	1582796	19	0.0507	ng/mL	----
N-MeFOSAA-d3	Auto	5.021	1582796	6245690	26	5.3429	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.021	1582796	1582796	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.622	713181	713181	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.622	713181	6245690	26	4.8343	ng/mL	----
N-MeFOSA	M	5.626	1521	713181	1	0.0090	ng/mL	----
N-MeFOSE-d7	Auto	5.596	839365	6245690	26	5.3803	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.596	839365	839365	20	5.0000	ng/mL	----
N-MeFOSE	M	5.603	803	839365	20	0.0037	ng/mL	----

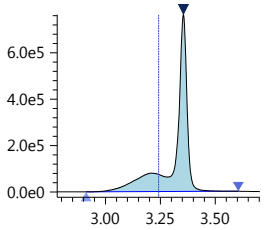
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.117	8889	1588528	21	0.0479	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.117	1588528	1588528	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.117	1588528	6245690	26	5.3750	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.755	1037309	1037309	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.755	1037309	6245690	26	5.0782	ng/mL	----
N-EtFOSA	M	5.766	257	1037309	23	0.0074	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.724	1073244	1073244	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.724	1073244	6245690	26	4.9842	ng/mL	----
N-EtFOSE	M	5.736	1693	1073244	24	0.0084	ng/mL	----
13C7-PFUnDA_IS	Auto	5.099	6245690	6245690	26	5.0000	ng/mL	----
PFPeS	Auto	4.214	218	833990	16	0.0020	ng/mL	----
PFNS	M	4.899	318	696841	13	0.0033	ng/mL	----

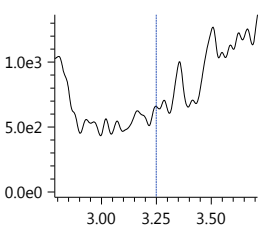
PFBA-13C_IS
Conc 5.0000
RT 3.355 Area 2749315
ISTD 216.90>172.15 (-) 7.64e5



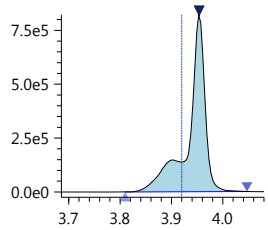
PFBA-13C
Conc 4.9431
RT 3.355 Area 2749315
Q 216.90>172.15 (-) 7.64e5



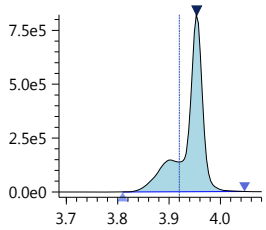
PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.37e3



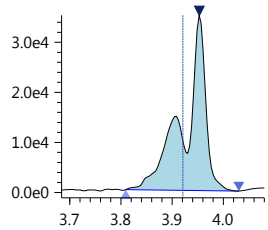
PFPeA-13C_IS
Conc 5.0000
RT 3.954 Area 1835287
ISTD 267.90>223.00 (-) 8.22e5



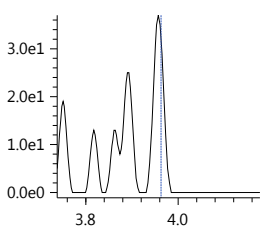
PFPeA-13C
Conc 5.0904
RT 3.954 Area 1835287
Q 267.90>223.00 (-) 8.22e5



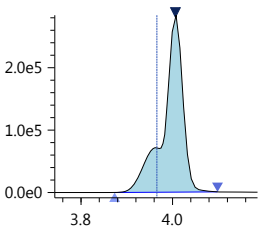
PFPeA
Conc -0.0046
RT 3.953 Area 102759
Q 263.05>219.10 (-) 3.54e4



PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 3.70e1



PFBS-13C
Conc 5.1190
RT 4.006 Area 833990
Q 301.80>80.00 (-) 2.84e5



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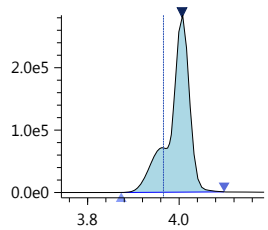
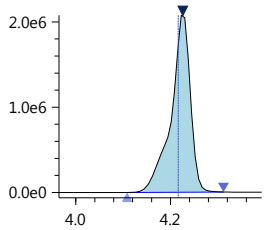
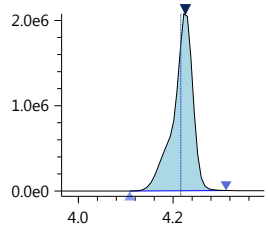
Conc 5.0000
RT 4.006 Area 833990
ISTD 301.80>80.00 (-) 2.84e5



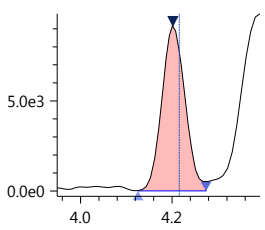
PFHxA-13C_IS
Conc 5.0000
RT 4.226 Area 5863628
ISTD 314.90>270.10 (-) 2.08e6



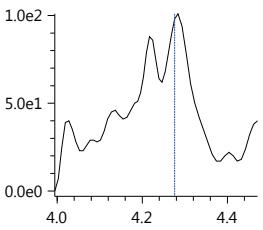
PFHxA-13C
Conc 5.2738
RT 4.226 Area 5863628
Q 314.90>270.10 (-) 2.08e6



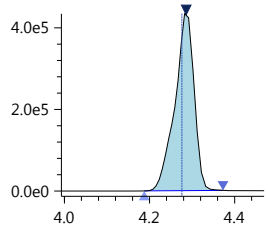
PFHxA
Conc -0.0043
RT 4.202 Area 32287
Q 313.00>269.00 (-) 9.84e3



HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 1.01e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.286 Area 1362900
ISTD 332.00>286.80 (-) 4.34e5



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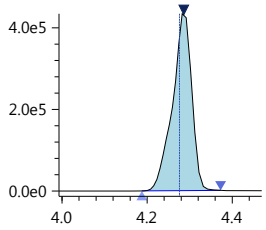
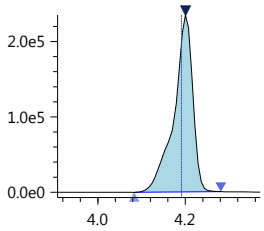
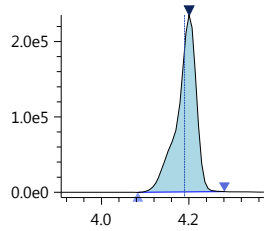
Conc 5.6453
RT 4.286 Area 1362900
Q 332.00>286.80 (-) 4.34e5



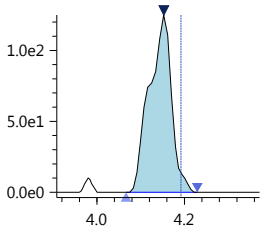
4_2-FTS-13C_IS
Conc 5.0000
RT 4.201 Area 692242
ISTD 328.80>309.05 (-) 2.35e5



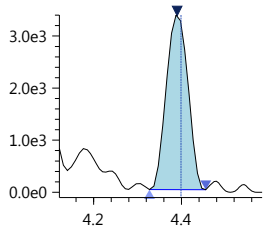
4_2-FTS-13C
Conc 4.7688
RT 4.201 Area 692242
Q 328.80>309.05 (-) 2.35e5



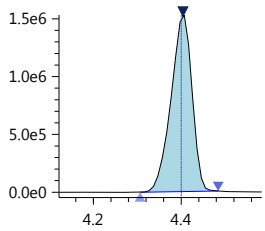
4_2-FTS_1
Conc 0.0028
RT 4.153 Area 443
Q 327.00>307.05 (-) 1.25e2



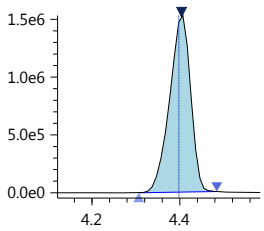
PFHpA
Conc -0.0254
RT 4.390 Area 11533
Q 362.90>319.00 (-) 3.40e3



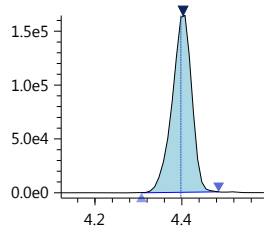
PFHpA-13C_IS
Conc 5.0000
RT 4.404 Area 5068651
ISTD 366.90>322.10 (-) 1.53e6



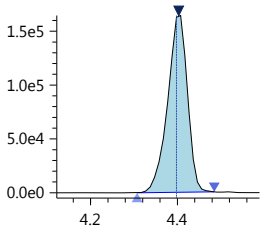
PFHpA-13C
Conc 4.4325
RT 4.404 Area 5068651
Q 366.90>322.10 (-) 1.53e6



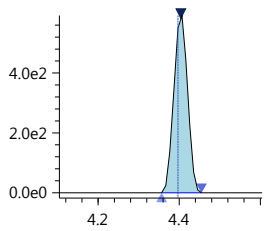
PFHxS-18O_IS
Conc 5.0000
RT 4.403 Area 521174
ISTD 402.70>84.05 (-) 1.65e5



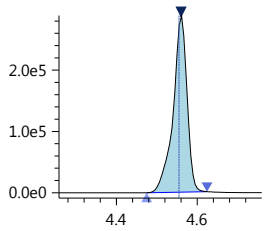
PFHxS-18O
Conc 4.6506
RT 4.403 Area 521174
Q 402.70>84.05 (-) 1.65e5



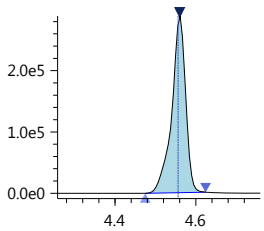
PFHxS_1
Conc 0.0124
RT 4.404 Area 1410
Q 399.00>80.00 (-) 5.92e2



6_2-FTS-13C
Conc 5.3325
RT 4.560 Area 684786
Q 428.90>409.00 (-) 2.89e5



6_2-FTS-13C_IS
Conc 5.0000
RT 4.560 Area 684786
ISTD 428.90>409.00 (-) 2.89e5



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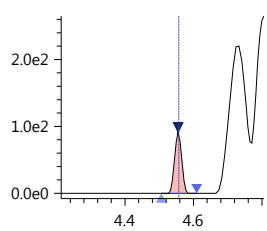
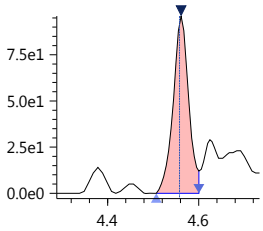
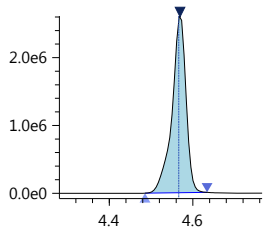
Conc 0.0009
RT 4.555 Area 131
Q 427.00>407.00 (-) 2.65e2



PFHpS_1
Conc 0.0018
RT 4.561 Area 226
Q 449.00>80.15 (-) 9.60e1



PFOA-13C_IS
Conc 5.0000
RT 4.569 Area 6063066
ISTD 416.80>372.05 (-) 2.61e6



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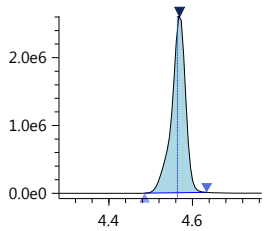
Conc 5.3194
RT 4.569 Area 6063066
Q 416.80>372.05 (-) 2.61e6



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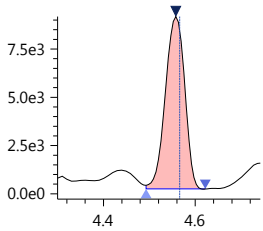
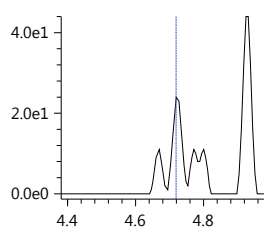
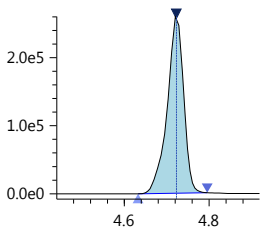
Conc 0.0010
RT 4.558 Area 26277
Q 413.00>369.00 (-) 9.18e3



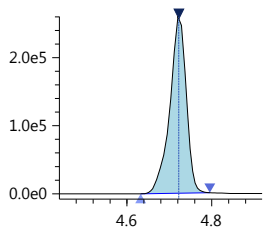
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 4.40e1



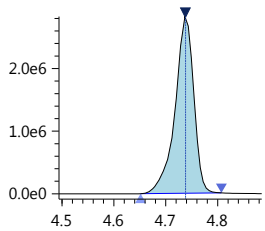
PFOS-13C_IS
Conc 5.0000
RT 4.722 Area 696841
ISTD 502.80>80.05 (-) 2.60e5



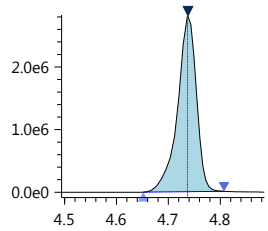
PFOS-13C
Conc 5.2410
RT 4.722 Area 696841
Q 502.80>80.05 (-) 2.60e5



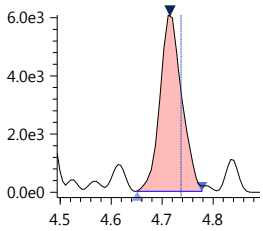
PFNA-13C_IS
Conc 5.0000
RT 4.738 Area 7060720
ISTD 467.80>423.00 (-) 2.83e6



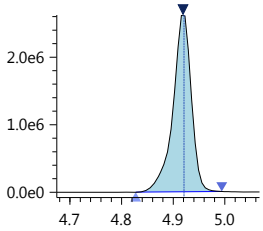
PFNA-13C
Conc 5.5232
RT 4.738 Area 7060720
Q 467.80>423.00 (-) 2.83e6



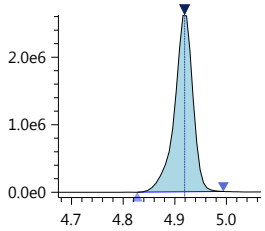
PFNA
Conc 0.0020
RT 4.715 Area 18137
Q 463.00>418.90 (-) 6.09e3



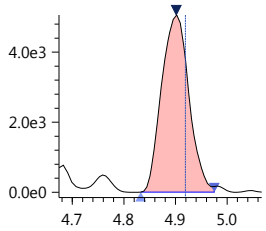
PFDA-13C_IS
Conc 5.0000
RT 4.919 Area 6504680
ISTD 514.80>469.95 (-) 2.62e6



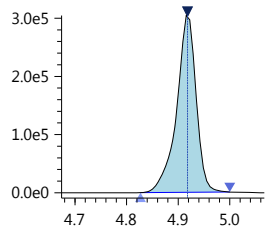
PFDA-13C
Conc 5.3938
RT 4.919 Area 6504680
Q 514.80>469.95 (-) 2.62e6



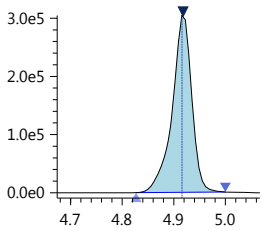
PFDA
Conc 0.0176
RT 4.901 Area 18716
Q 513.00>468.80 (-) 5.06e3



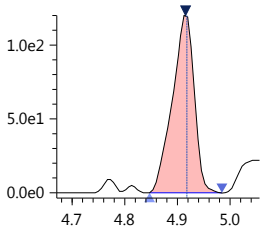
8_2-FTS-13C_IS
Conc 5.0000
RT 4.918 Area 802467
ISTD 528.80>509.00 (-) 3.05e5



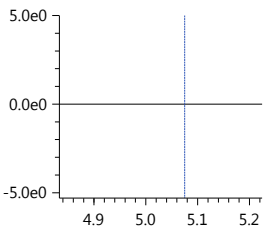
8_2-FTS-13C
Conc 5.3560
RT 4.918 Area 802467
Q 528.80>509.00 (-) 3.05e5



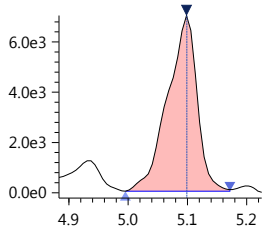
8_2-FTS_1
Conc 0.0023
RT 4.915 Area 348
Q 527.10>506.90 (-) 1.20e2



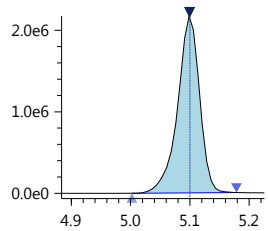
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



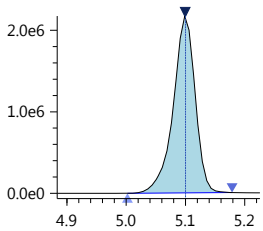
PFUnA
Conc -0.0121
RT 5.098 Area 24237
Q 563.00>518.90 (-) 7.05e3



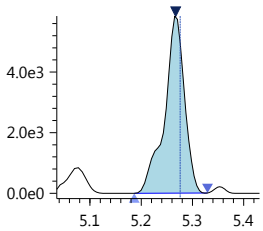
PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5583950
ISTD 564.80>519.95 (-) 2.18e6



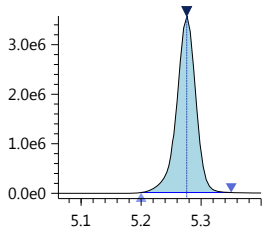
PFUnA-13C
Conc 5.1461
RT 5.099 Area 5583950
Q 564.80>519.95 (-) 2.18e6



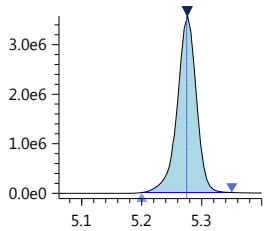
PFDoA
Conc 0.0066
RT 5.267 Area 15823
Q 613.05>569.00 (-) 5.85e3



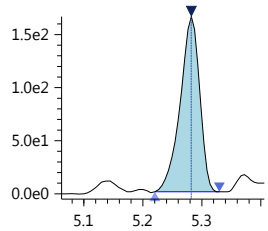
PFDoA-13C
Conc 4.9766
RT 5.276 Area 7865833
Q 614.80>569.95 (-) 3.58e6



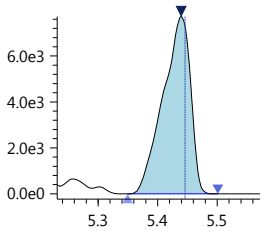
PFDoA-13C_IS
Conc 5.0000
RT 5.276 Area 7865833
ISTD 614.80>569.95 (-) 3.58e6



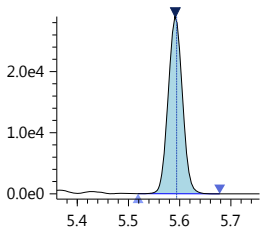
10_2-FtS_1
Conc 0.0020
RT 5.282 Area 378
Q 627.00>606.95 (-) 1.67e2



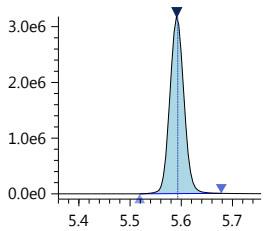
PFTrDA
Conc 0.0088
RT 5.439 Area 24863
Q 663.00>618.90 (-) 7.72e3



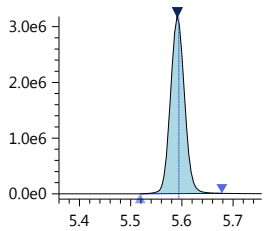
PFTeDA
Conc -0.0058
RT 5.592 Area 56186
Q 713.40>669.00 (-) 2.90e4



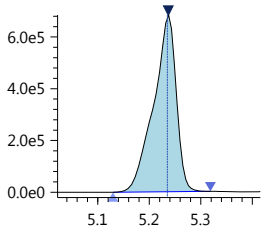
PFTeDA-13C
Conc 5.2001
RT 5.591 Area 6085488
Q 714.70>669.90 (-) 3.18e6



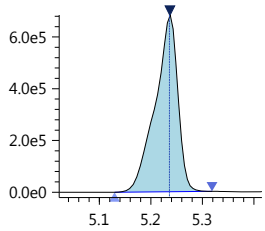
PFTeDA-13C_IS
Conc 5.0000
RT 5.591 Area 6085488
ISTD 714.70>669.90 (-) 3.18e6



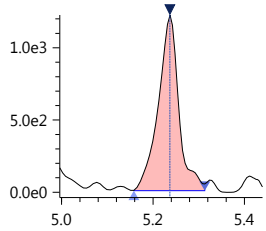
FOSA-13C_IS
Conc 5.0000
RT 5.237 Area 2071697
ISTD 506.00>78.05 (-) 6.85e5



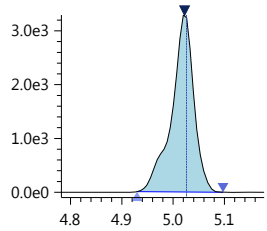
FOSA-13C
Conc 5.1033
RT 5.237 Area 2071697
Q 506.00>78.05 (-) 6.85e5



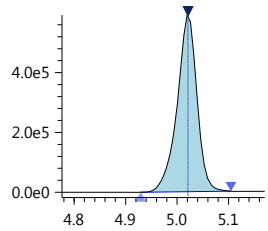
FOSA
Conc 0.0070
RT 5.237 Area 3787
Q 498.20>78.00 (-) 1.23e3



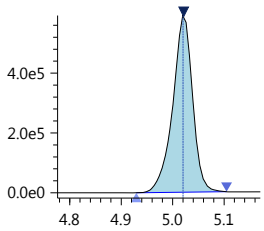
N-MeFOSAA
Conc 0.0507
RT 5.022 Area 9888
Q 570.20>419.00 (-) 3.30e3



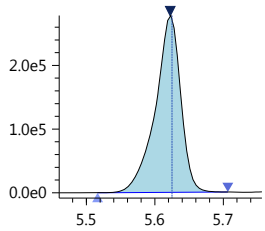
N-MeFOSAA-d3
Conc 5.3429
RT 5.021 Area 1582796
Q 572.80>419.05 (-) 5.93e5



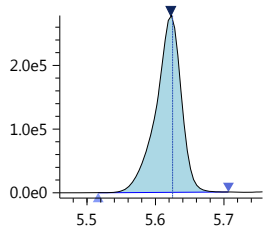
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.021 Area 1582796
ISTD 572.80>419.05 (-) 5.93e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 713181
ISTD 514.90>168.90 (-) 2.78e5



N-MeFOSA-d3
Conc 4.8343
RT 5.622 Area 713181
Q 514.90>168.90 (-) 2.78e5



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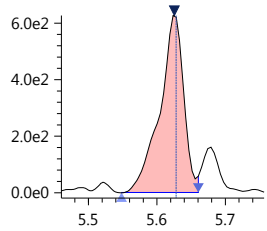
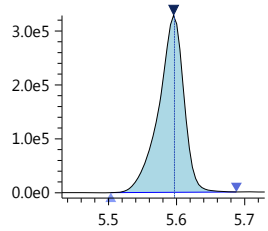
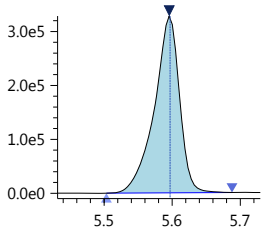
Conc 0.0090
RT 5.626 Area 1521
Q 512.00>169.10 (-) 6.27e2



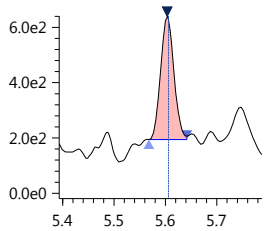
N-MeFOSE-d7
Conc 5.3803
RT 5.596 Area 839365
Q 622.70>59.10 (-) 3.29e5



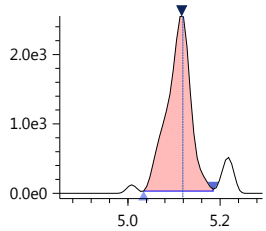
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.596 Area 839365
ISTD 622.70>59.10 (-) 3.29e5



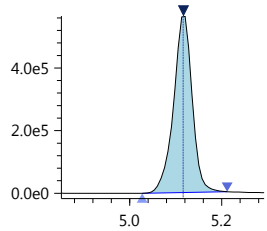
N-MeFOSE
Conc 0.0037
RT 5.603 Area 803
Q 616.00>59.00 (-) 6.41e2



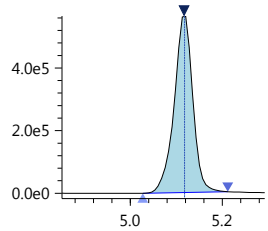
N-EtFOSAA
Conc 0.0479
RT 5.117 Area 8889
Q 584.20>418.95 (-) 2.56e3



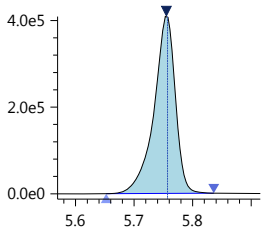
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1588528
ISTD 588.80>419.00 (-) 5.66e5



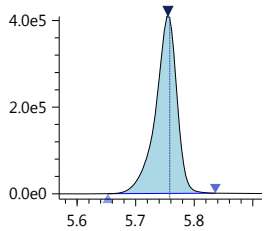
N-EtFOSAA-d5
Conc 5.3750
RT 5.117 Area 1588528
Q 588.80>419.00 (-) 5.66e5



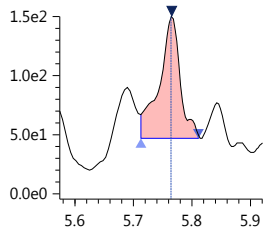
N-EtFOSA-d9_IS
Conc 5.0000
RT 5.755 Area 1037309
ISTD 530.90>169.15 (-) 4.09e5



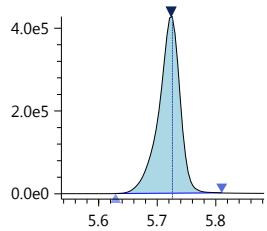
N-EtFOSA-d9
Conc 5.0782
RT 5.755 Area 1037309
Q 530.90>169.15 (-) 4.09e5



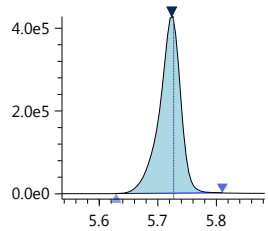
N-EtFOSA
Conc 0.0074
RT 5.766 Area 257
Q 526.90>169.10 (-) 1.50e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.724 Area 1073244
ISTD 638.70>59.10 (-) 4.28e5

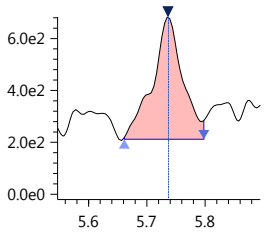


N-EtFOSE-d9
Conc 4.9842
RT 5.724 Area 1073244
Q 638.70>59.10 (-) 4.28e5



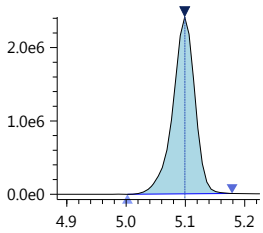
N-EtFOSE

Conc 0.0084
RT 5.736 Area 1693
Q 630.00>58.90 (-) 6.83e2



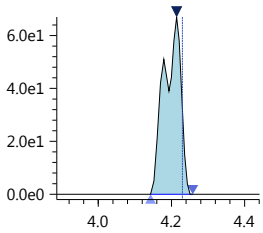
13C7-PFUnDA_IS

Conc 5.0000
RT 5.099 Area 6245690
ISTD 570.00>525.00 (-) 2.42e6



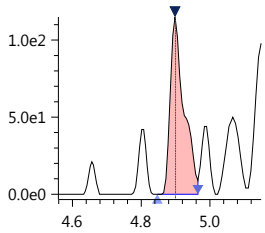
PFPeS

Conc 0.0020
RT 4.214 Area 218
Q 349.00>99.00 (-) 6.70e1



PFNS

Conc 0.0033
RT 4.899 Area 318
Q 549.00>99.00 (-) 1.15e2



190301_015

Sample ID: IB
Date acquired: 3/1/2019 5:50:51 PM
Acquired by: System Administrator
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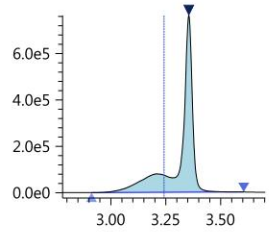
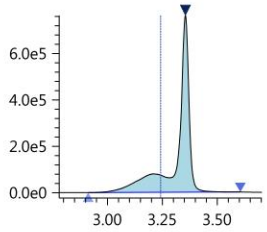
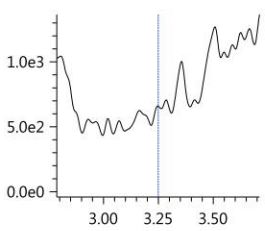
PFBA-13C_IS
Conc 5.0000
RT 3.355 Area 2749315
ISTD 216.90>172.15 (-) 7.64e5



PFBA-13C
Conc 4.9431
RT 3.355 Area 2749315
Q 216.90>172.15 (-) 7.64e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.37e3



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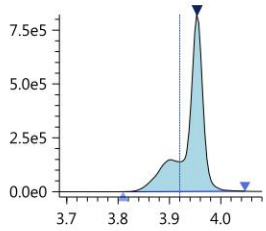
Conc 5.0000
RT 3.954 Area 1835287
ISTD 267.90>223.00 (-) 8.22e5



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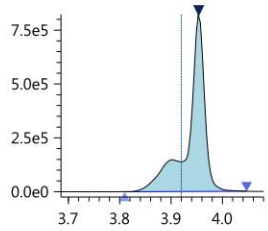
Conc 5.0904
RT 3.954 Area 1835287
Q 267.90>223.00 (-) 8.22e5



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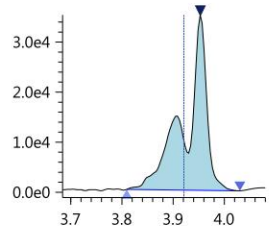
Q 263.05>219.10 (-) 3.54e4



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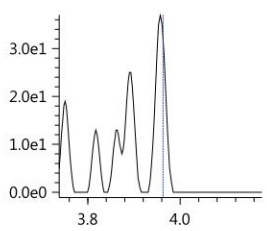
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 3.70e1



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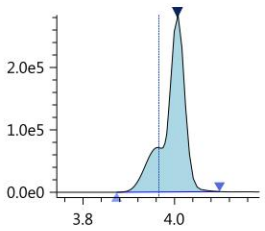
Conc 5.1190
RT 4.006 Area 833990
Q 301.80>80.00 (-) 2.84e5



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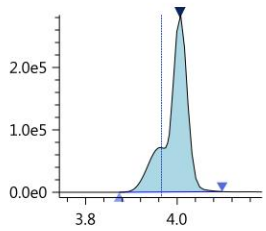

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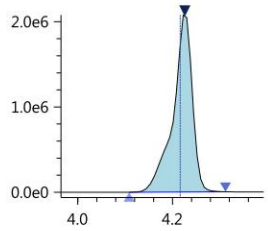
RT 4.226 Area 5863628
ISTD 314.90>270.10 (-) 2.08e6



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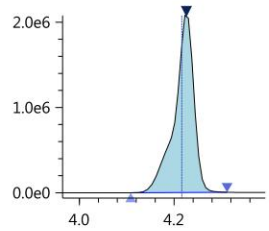
Q 314.90>270.10 (-) 2.08e6



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Conc 0.0247
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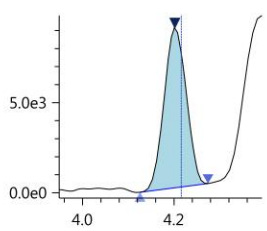
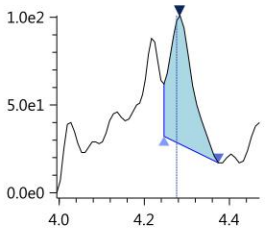
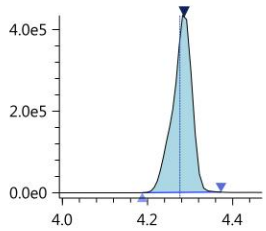
Q 313.00>269.00 (-) 9.84e3



HPFO_DA
Conc 0.0010
RT 4.283 Area 278
Q 329.00>169.00 (-) 1.01e2



HFPO_DA-13C_IS
Conc 5.0000
RT 4.286 Area 1362900
ISTD 332.00>286.80 (-) 4.34e5



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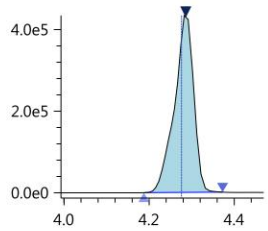
Q 332.00>286.80 (-) 4.34e5



4_2-FTS-13C_IS
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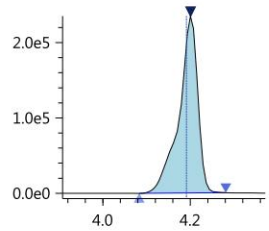
RT 4.201 Area 692242
ISTD 328.80>309.05 (-) 2.35e5



4_2-FTS-13C
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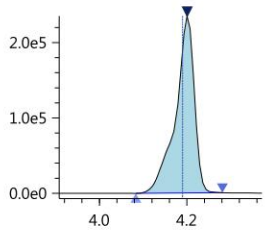
RT 4.201 Area 692242
Q 328.80>309.05 (-) 2.35e5



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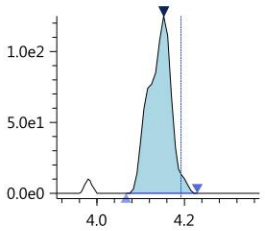
Conc 0.0028
RT 4.153 Area 443
Q 327.00>307.05 (-) 1.25e2



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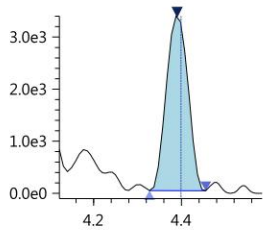
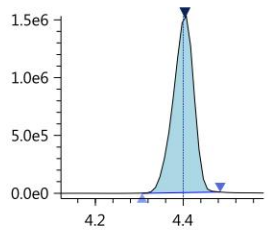
Conc 0.0121
RT 4.390 Area 11533
Q 362.90>319.00 (-) 3.40e3



PFHpA-13C_IS
Conc 5.0000
RT 4.404 Area 5068651
ISTD 366.90>322.10 (-) 1.53e6



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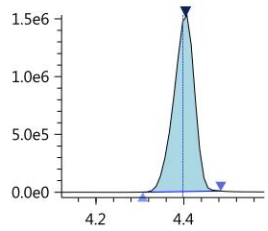
Conc 4.4325
RT 4.404 Area 5068651
Q 366.90>322.10 (-) 1.53e6



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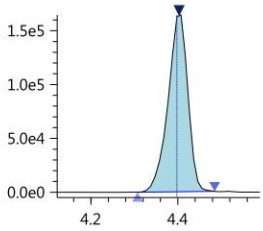
ISTD 402.70>84.05 (-) 1.65e5



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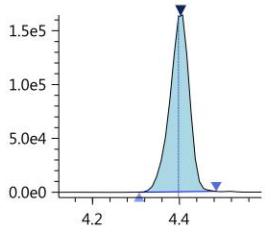
RT 4.403 Area 521174
Q 402.70>84.05 (-) 1.65e5



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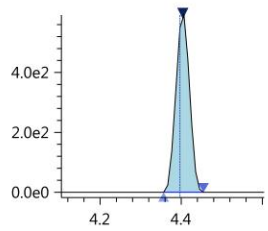
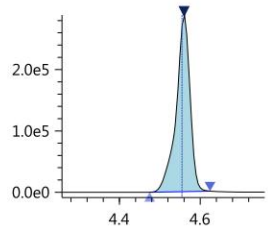
Conc 0.0130
RT 4.404 Area 1410
Q 399.00>80.00 (-) 5.92e2



6_2-FTS-13C
Conc 5.3325
RT 4.560 Area 684786
Q 428.90>409.00 (-) 2.89e5



6_2-FTS-13C_IS
Conc 5.0000
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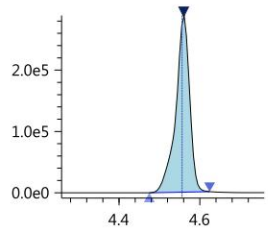
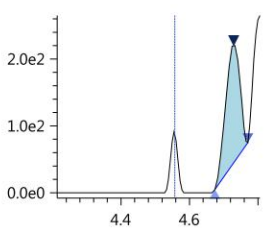
ISTD 428.90>409.00 (-) 2.89e5



6_2-FTS_1
Conc 0.0037
RT 4.729 Area 516
Q 427.00>407.00 (-) 2.65e2



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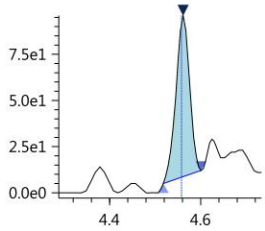
Conc 0.0014
RT 4.561 Area 182
Q 449.00>80.15 (-) 9.60e1



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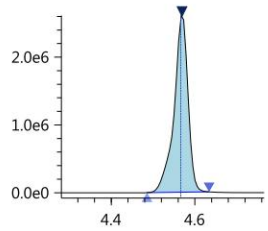
Conc 5.0000
RT 4.569 Area 6063066
ISTD 416.80>372.05 (-) 2.61e6



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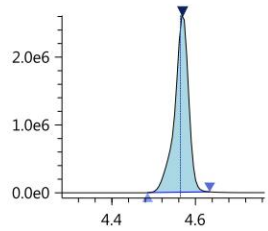

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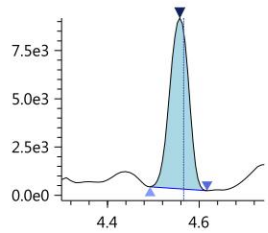
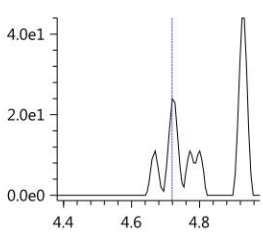
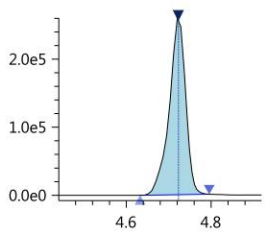
Conc 0.0230
RT 4.558 Area 25665
Q 413.00>369.00 (-) 9.18e3



PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 4.40e1



PFOS-13C_IS
Conc 5.0000
RT 4.722 Area 696841
ISTD 502.80>80.05 (-) 2.60e5



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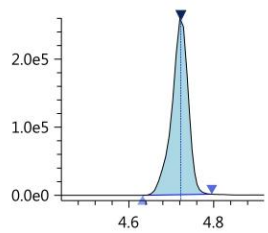

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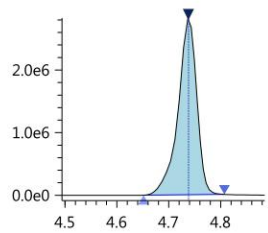
ISTD 467.80>423.00 (-) 2.83e6



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RT 4.738 Area 7060720
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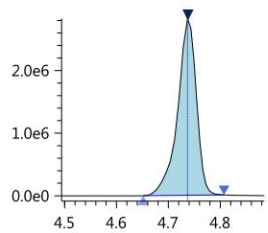

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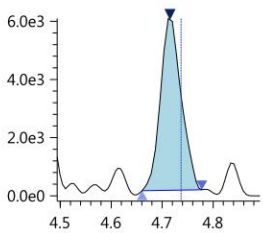
RT 4.715 Area 16953
Q 463.00>418.90 (-) 6.09e3



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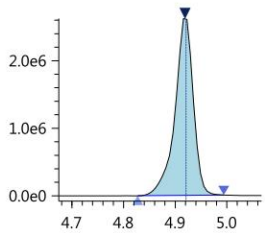

PFDA-13C
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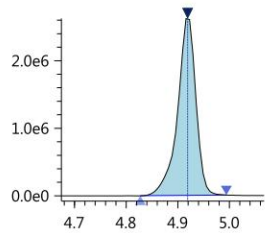
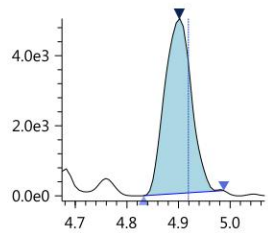
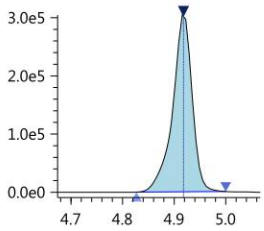
RT 4.919 Area 6504680
Q 514.80>469.95 (-) 2.62e6



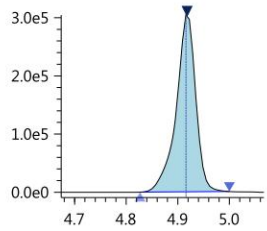
PFDA
Conc 0.0171
RT 4.901 Area 18168
Q 513.00>468.80 (-) 5.06e3



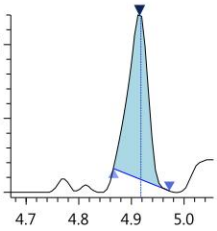
8_2-FTS-13C_IS
Conc 5.0000
RT 4.918 Area 802467
ISTD 528.80>509.00 (-) 3.05e5



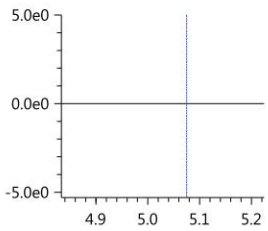
8_2-FTS-13C
Conc 5.3560
RT 4.918 Area 802467
Q 528.80>509.00 (-) 3.05e5



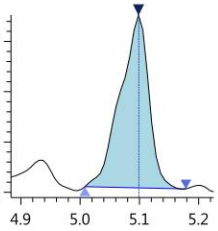
8_2-FTS_1
Conc 0.0019
RT 4.915 Area 287
Q 527.10>506.90 (-) 1.20e2



PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



PFUnA
Conc 0.0221
RT 5.098 Area 23014
Q 563.00>518.90 (-) 7.05e3



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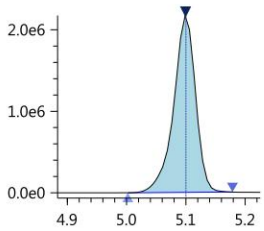
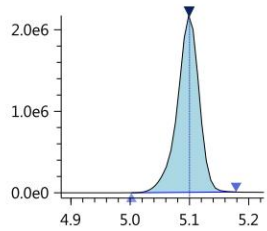
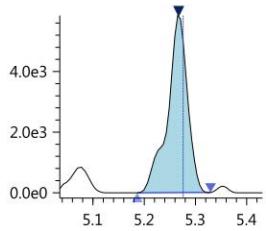
Conc 5.0000
RT 5.099 Area 5583950
ISTD 564.80>519.95 (-) 2.18e6



PFUnA-13C
Conc 5.1461
RT 5.099 Area 5583950
Q 564.80>519.95 (-) 2.18e6



PFDoA
Conc 0.0161
RT 5.267 Area 15823
Q 613.05>569.00 (-) 5.85e3



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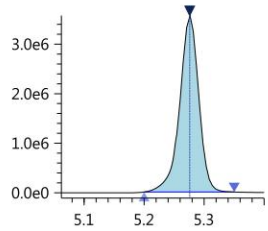
Conc 4.9766
RT 5.276 Area 7865833
Q 614.80>569.95 (-) 3.58e6



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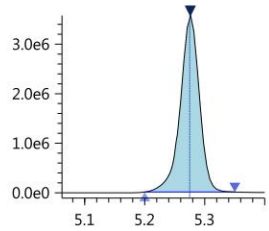

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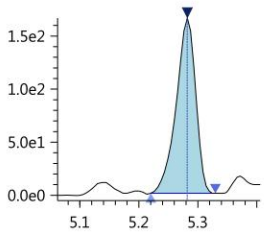

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Conc 0.0214
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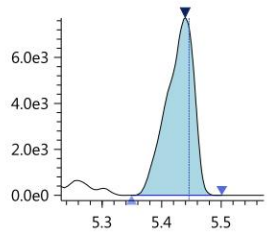

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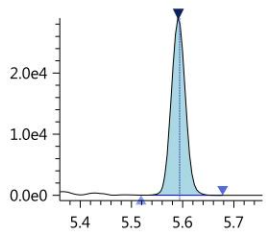

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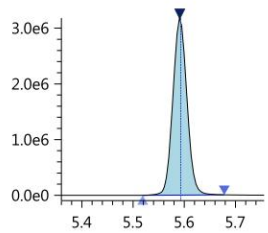
Q 714.70>669.90 (-) 3.18e6



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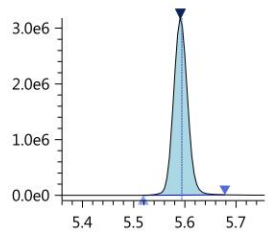

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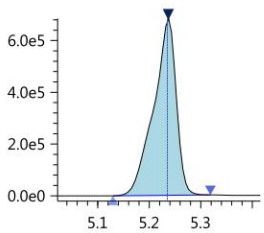

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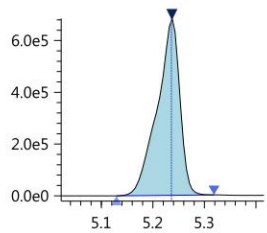

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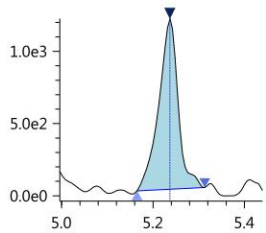
Q 498.20>78.00 (-) 1.23e3



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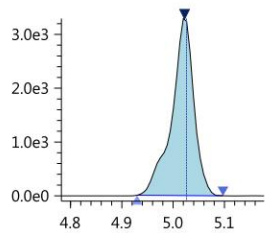
Q 570.20>419.00 (-) 3.30e3



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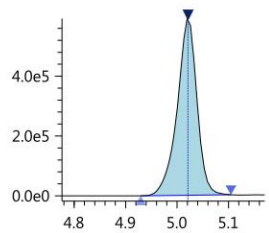
Q 572.80>419.05 (-) 5.93e5



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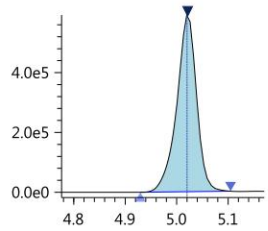

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Conc 5.0000
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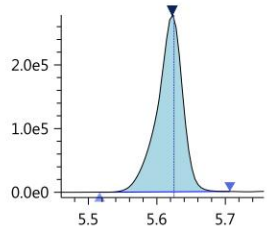
ISTD 514.90>168.90 (-) 2.78e5



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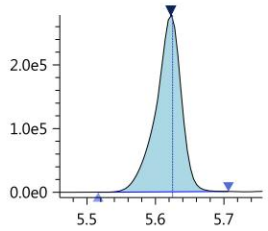

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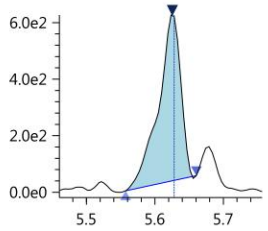

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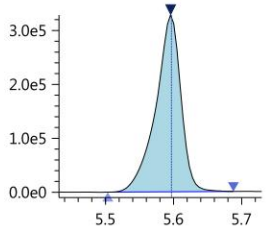
RT 5.596 Area 839365
Q 622.70>59.10 (-) 3.29e5



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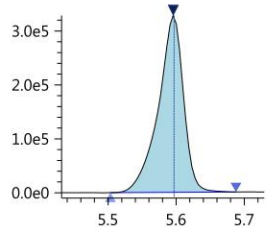

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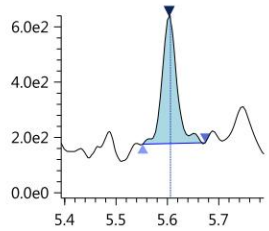
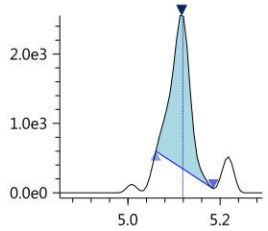
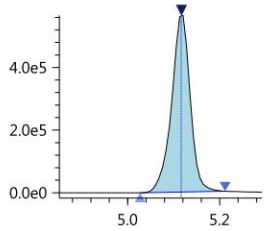
Q 616.00>59.00 (-) 6.41e2



N-EtFOSAA
Conc 0.0334
RT 5.117 Area 6299
Q 584.20>418.95 (-) 2.56e3



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1588528
ISTD 588.80>419.00 (-) 5.66e5



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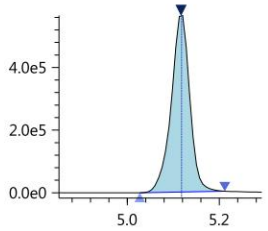

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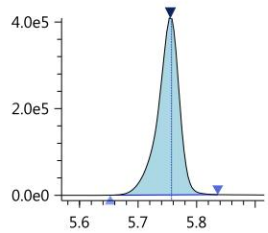
ISTD 530.90>169.15 (-) 4.09e5



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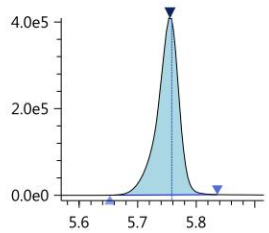

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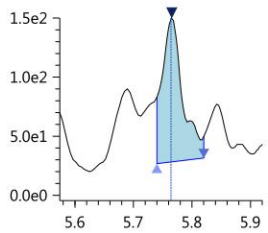
RT 5.766 Area 297
Q 526.90>169.10 (-) 1.50e2



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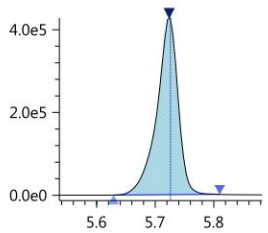
RT 5.724 Area 1073244
ISTD 638.70>59.10 (-) 4.28e5



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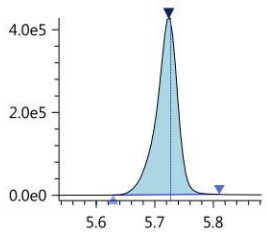

N-EtFOSE
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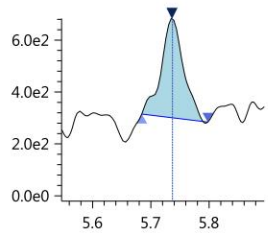
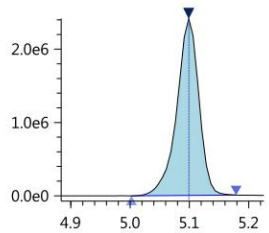
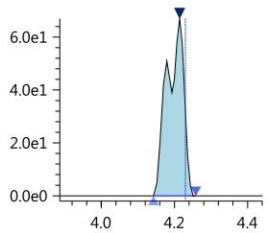
RT 5.736 Area 1022
Q 630.00>58.90 (-) 6.83e2



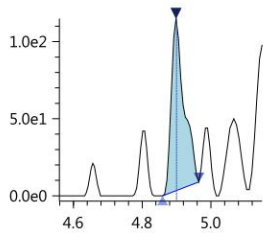
13C7-PFUnDA_IS
Conc 5.0000
RT 5.099 Area 6245690
ISTD 570.00>525.00 (-) 2.42e6



PFPeS
Conc 0.0020
RT 4.214 Area 218
Q 349.00>99.00 (-) 6.70e1



PFNS
Conc 0.0030
RT 4.899 Area 289
Q 549.00>99.00 (-) 1.15e2



190301_016

Sample ID: 1.0 PPB ICV
Date acquired: 3/1/2019 6:01:19 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_016.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

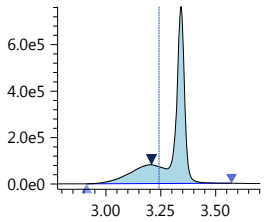
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.208	2794732	2794732	2	5.0000	ng/mL	5.0000
PFBA-13C	Auto	3.208	2794732	6505045	26	4.8244	ng/mL	5.0000
PFBA	Auto	3.342	506805	2794732	2	0.9574	ng/mL	1.0000
PFPeA-13C_IS	Auto	3.942	1839368	1839368	4	5.0000	ng/mL	5.0000
PFPeA-13C	Auto	3.942	1839368	6505045	26	4.8983	ng/mL	5.0000
PFPeA	Auto	3.943	919002	1839368	4	0.9635	ng/mL	1.0000
PFBS_1	Auto	3.995	144763	781387	16	0.8633	ng/mL	0.8874
PFBS-13C	Auto	3.997	781387	6505045	26	4.6049	ng/mL	5.0000
PFBS-13C_IS	Auto	3.997	781387	781387	16	5.0000	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.210	5606245	5606245	6	5.0000	ng/mL	5.0000
PFHxA-13C	Auto	4.210	5606245	6505045	26	4.8413	ng/mL	5.0000
PFHxA	Auto	4.210	982339	5606245	6	0.9472	ng/mL	1.0000
HPFO_DA	Auto	4.272	258798	1271307	3	0.9486	ng/mL	1.0000
HFPO_DA-13C_IS	Auto	4.272	1271307	1271307	3	5.0000	ng/mL	5.0000
HFPO_DA-13C	Auto	4.272	1271307	6505045	26	5.0560	ng/mL	5.0000
4_2-FTS-13C_IS	Auto	4.183	744276	744276	5	5.0000	ng/mL	5.0000
4_2-FTS-13C	Auto	4.183	744276	6505045	26	4.9229	ng/mL	5.0000
4_2-FTS_1	Auto	4.183	152153	744276	5	0.8842	ng/mL	0.9372
PFHpA	Auto	4.391	1059091	6185071	8	1.0496	ng/mL	1.0000
PFHpA-13C_IS	Auto	4.391	6185071	6185071	8	5.0000	ng/mL	5.0000
PFHpA-13C	Auto	4.391	6185071	6505045	26	5.1932	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.392	679512	679512	7	5.0000	ng/mL	5.0000
PFHxS-18O	Auto	4.392	679512	6505045	26	5.8217	ng/mL	5.0000
PFHxS_1	Auto	4.389	115480	679512	7	0.7809	ng/mL	0.9131
6_2-FTS-13C	Auto	4.548	679499	6505045	26	5.0804	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.548	679499	679499	10	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.548	134372	802500	15	0.9232	ng/mL	0.9512
PFHpS_1	Auto	4.549	132179	679512	7	0.7911	ng/mL	0.9534
PFOA-13C_IS	Auto	4.558	6092833	6092833	9	5.0000	ng/mL	5.0000
PFOA-13C	Auto	4.558	6092833	6505045	26	5.1324	ng/mL	5.0000
PFOA	Auto	4.557	931939	6092833	9	0.9029	ng/mL	1.0000
PFOS_1	Auto	4.712	80625	603871	13	0.9800	ng/mL	0.9292
PFOS-13C_IS	Auto	4.711	603871	603871	13	5.0000	ng/mL	5.0000
PFOS-13C	Auto	4.711	603871	6505045	26	4.3607	ng/mL	5.0000
PFNA-13C_IS	Auto	4.726	6236601	6236601	11	5.0000	ng/mL	5.0000
PFNA-13C	Auto	4.726	6236601	6505045	26	4.6840	ng/mL	5.0000
PFNA	Auto	4.726	837831	6236601	11	0.9691	ng/mL	1.0000
PFDA-13C_IS	Auto	4.909	5938863	5938863	12	5.0000	ng/mL	5.0000
PFDA-13C	Auto	4.909	5938863	6505045	26	4.7283	ng/mL	5.0000
PFDA	Auto	4.908	893337	5938863	12	0.9218	ng/mL	1.0000
8_2-FTS-13C_IS	Auto	4.908	802500	802500	15	5.0000	ng/mL	5.0000
8_2-FTS-13C	Auto	4.908	802500	6505045	26	5.1426	ng/mL	5.0000
8_2-FTS_1	Auto	4.907	141804	802500	15	0.9239	ng/mL	0.9600
PFDS_1	Auto	5.066	107682	603871	13	1.0760	ng/mL	0.9647
PFUnA	Auto	5.089	878033	5594689	14	0.9770	ng/mL	1.0000
PFUnA-13C_IS	Auto	5.089	5594689	5594689	14	5.0000	ng/mL	5.0000
PFUnA-13C	Auto	5.089	5594689	6505045	26	4.9504	ng/mL	5.0000
PFDoA	Auto	5.268	955807	8334113	17	0.9487	ng/mL	1.0000
PFDoA-13C	Auto	5.267	8334113	6505045	26	5.0627	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.267	8334113	8334113	17	5.0000	ng/mL	5.0000
10_2-FtS_1	Auto	5.274	177850	802500	15	0.9635	ng/mL	0.9662
PFTrDA	Auto	5.436	1055086	5883759	22	0.9913	ng/mL	1.0000
PFTeDA	Auto	5.583	461723	5883759	22	0.9967	ng/mL	1.0000
PFTeDA-13C	Auto	5.583	5883759	6505045	26	4.8273	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.583	5883759	5883759	22	5.0000	ng/mL	5.0000
FOSA-13C_IS	Auto	5.227	2126374	2126374	18	5.0000	ng/mL	5.0000
FOSA-13C	Auto	5.227	2126374	6505045	26	5.0291	ng/mL	5.0000
FOSA	Auto	5.227	552221	2126374	18	0.9879	ng/mL	1.0000
N-MeFOSAA	Auto	5.015	197245	1506673	19	1.0617	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.011	1506673	6505045	26	4.8832	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.011	1506673	1506673	19	5.0000	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.615	739384	739384	1	5.0000	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.615	739384	6505045	26	4.8121	ng/mL	5.0000
N-MeFOSA	Auto	5.618	163025	739384	1	0.9306	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.588	841005	6505045	26	5.1759	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.588	841005	841005	20	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.596	205567	841005	20	0.9463	ng/mL	1.0000

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.111	204550	1597762	21	1.0950	ng/mL	1.0000
N-EtFOSAA-d5_IS	Auto	5.108	1597762	1597762	21	5.0000	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.108	1597762	6505045	26	5.1907	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.747	1038897	1038897	23	5.0000	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.747	1038897	6505045	26	4.8832	ng/mL	5.0000
N-EtFOSA	Auto	5.752	30804	1038897	23	0.8896	ng/mL	1.0000
N-EtFOSE-d9_IS	Auto	5.716	1083313	1083313	24	5.0000	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.716	1083313	6505045	26	4.8304	ng/mL	5.0000
N-EtFOSE	Auto	5.726	198606	1083313	24	0.9784	ng/mL	1.0000
13C7-PFUnDA_IS	Auto	5.089	6505045	6505045	26	5.0000	ng/mL	5.0000
PFPeS	Auto	4.224	96125	781387	16	0.9500	ng/mL	0.9409
PFNS	Auto	4.890	84794	603871	13	1.0031	ng/mL	0.9616

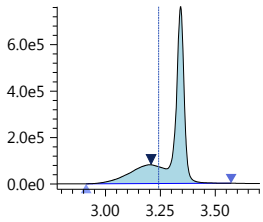
PFBA-13C_IS

Conc 5.0000
RT 3.208 Area 2794732
ISTD 216.90>172.15 (-) 7.64e5



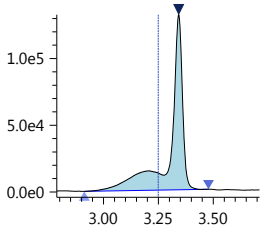
PFBA-13C

Conc 4.8244
RT 3.208 Area 2794732
Q 216.90>172.15 (-) 7.64e5



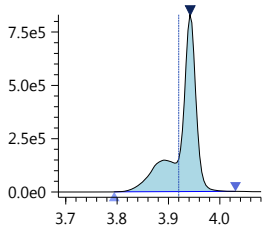
PFBA

Conc 0.9574
RT 3.342 Area 506805
Q 213.00>169.10 (-) 1.33e5



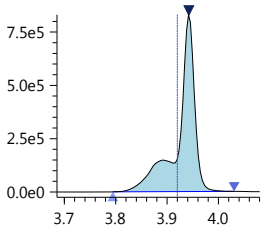
PFPeA-13C_IS

Conc 5.0000
RT 3.942 Area 1839368
ISTD 267.90>223.00 (-) 8.31e5



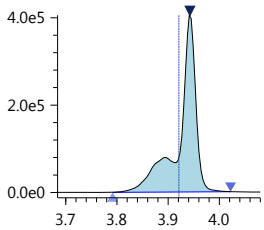
PFPeA-13C

Conc 4.8983
RT 3.942 Area 1839368
Q 267.90>223.00 (-) 8.31e5



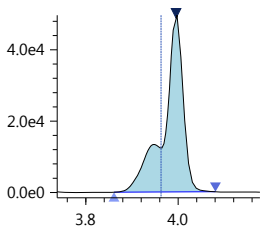
PFPeA

Conc 0.9635
RT 3.943 Area 919002
Q 263.05>219.10 (-) 4.06e5



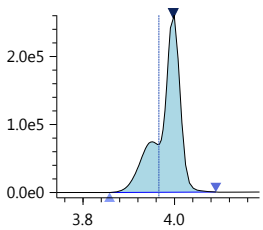
PFBS_1

Conc 0.8633
RT 3.995 Area 144763
Q 299.00>80.00 (-) 4.97e4



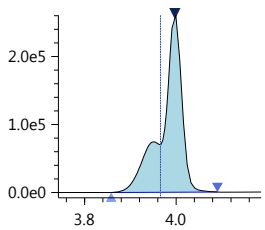
PFBS-13C

Conc 4.6049
RT 3.997 Area 781387
Q 301.80>80.00 (-) 2.61e5



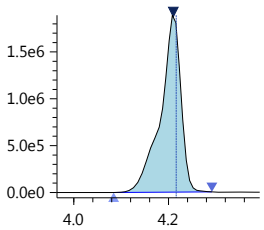
PFBS-13C_IS

Conc 5.0000
RT 3.997 Area 781387
ISTD 301.80>80.00 (-) 2.61e5



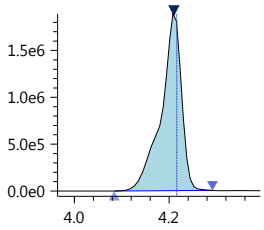
PFHxA-13C_IS

Conc 5.0000
RT 4.210 Area 5606245
ISTD 314.90>270.10 (-) 1.89e6



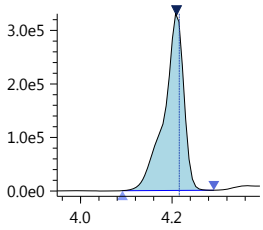
PFHxA-13C

Conc 4.8413
RT 4.210 Area 5606245
Q 314.90>270.10 (-) 1.89e6



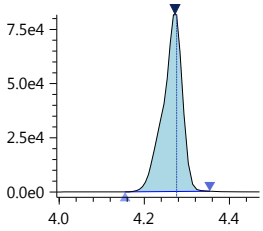
PFHxA

Conc 0.9472
RT 4.210 Area 982339
Q 313.00>269.00 (-) 3.31e5



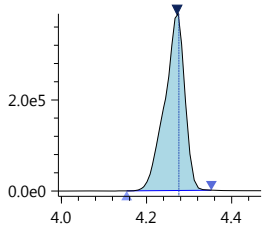
HPFO_DA

Conc 0.9486
RT 4.272 Area 258798
Q 329.00>169.00 (-) 8.18e4



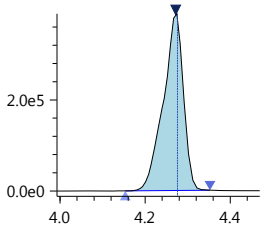
HFPO_DA-13C_IS

Conc 5.0000
RT 4.272 Area 1271307
ISTD 332.00>286.80 (-) 3.89e5

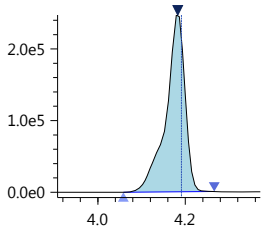


HFPO_DA-13C

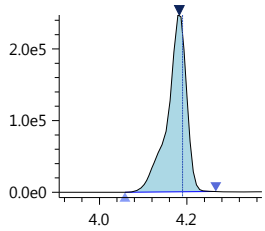
Conc 5.0560
RT 4.272 Area 1271307
Q 332.00>286.80 (-) 3.89e5



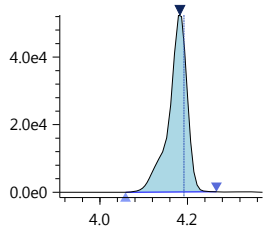
4_2-FTS-13C_IS
Conc 5.0000
RT 4.183 Area 744276
ISTD 328.80>309.05 (-) 2.47e5



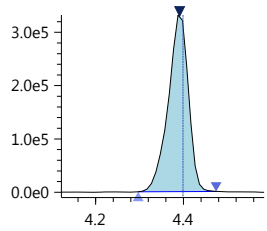
4_2-FTS-13C
Conc 4.9229
RT 4.183 Area 744276
Q 328.80>309.05 (-) 2.47e5



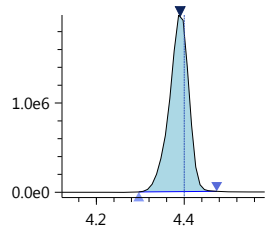
4_2-FTS_1
Conc 0.8842
RT 4.183 Area 152153
Q 327.00>307.05 (-) 5.25e4



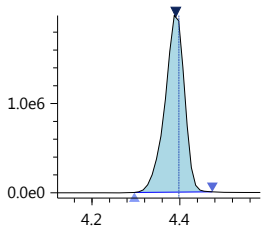
PFHpA
Conc 1.0496
RT 4.391 Area 1059091
Q 362.90>319.00 (-) 3.33e5



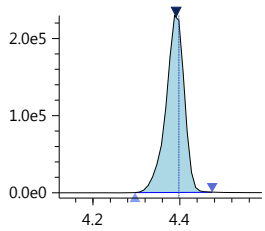
PFHpA-13C_IS
Conc 5.0000
RT 4.391 Area 6185071
ISTD 366.90>322.10 (-) 1.99e6



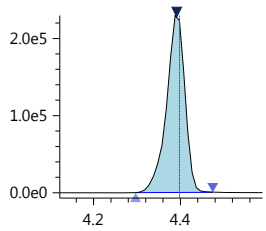
PFHpA-13C
Conc 5.1932
RT 4.391 Area 6185071
Q 366.90>322.10 (-) 1.99e6



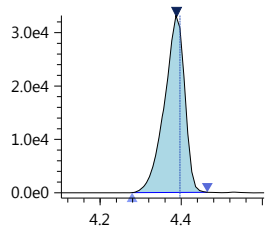
PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 679512
ISTD 402.70>84.05 (-) 2.30e5



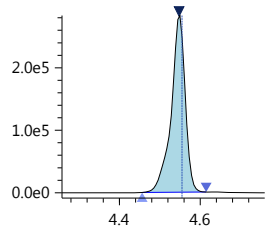
PFHxS-18O
Conc 5.8217
RT 4.392 Area 679512
Q 402.70>84.05 (-) 2.30e5



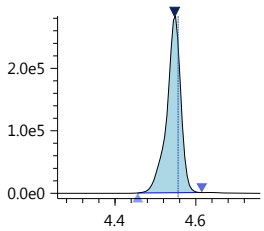
PFHxS_1
Conc 0.7809
RT 4.389 Area 115480
Q 399.00>80.00 (-) 3.32e4



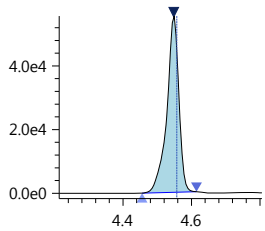
6_2-FTS-13C
Conc 5.0804
RT 4.548 Area 679499
Q 428.90>409.00 (-) 2.84e5



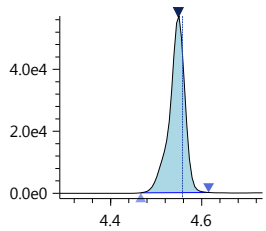
6_2-FTS-13C_IS
Conc 5.0000
RT 4.548 Area 679499
ISTD 428.90>409.00 (-) 2.84e5



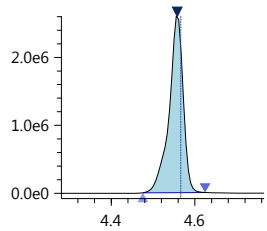
6_2-FTS_1
Conc 0.9232
RT 4.548 Area 134372
Q 427.00>407.00 (-) 5.57e4



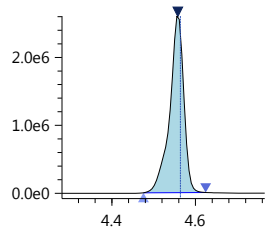
PFHpS_1
Conc 0.7911
RT 4.549 Area 132179
Q 449.00>80.15 (-) 5.72e4



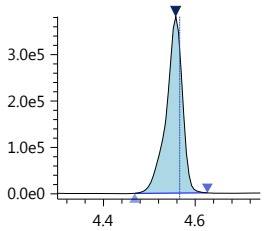
PFOA-13C_IS
Conc 5.0000
RT 4.558 Area 6092833
ISTD 416.80>372.05 (-) 2.61e6



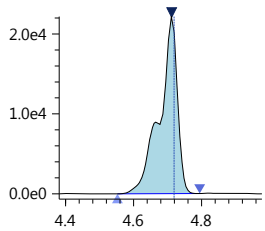
PFOA-13C
Conc 5.1324
RT 4.558 Area 6092833
Q 416.80>372.05 (-) 2.61e6



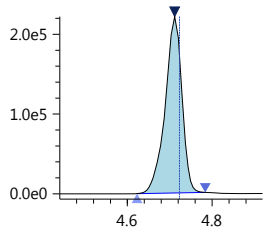
PFOA
Conc 0.9029
RT 4.557 Area 931939
Q 413.00>369.00 (-) 3.82e5



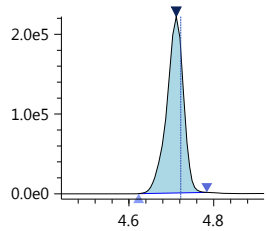
PFOS_1
Conc 0.9800
RT 4.712 Area 80625
Q 499.00>80.00 (-) 2.22e4



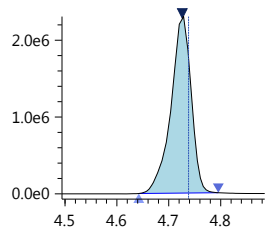
PFOS-13C_IS
Conc 5.0000
RT 4.711 Area 603871
ISTD 502.80>80.05 (-) 2.22e5



PFOS-13C
Conc 4.3607
RT 4.711 Area 603871
Q 502.80>80.05 (-) 2.22e5



PFNA-13C_IS
Conc 5.0000
RT 4.726 Area 6236601
ISTD 467.80>423.00 (-) 2.31e6

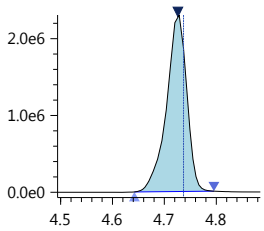


PFNA-13C

Conc 4.6840

RT 4.726 Area 6236601

Q 467.80>423.00 (-) 2.31e6

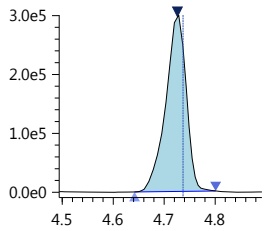


PFNA

Conc 0.9691

RT 4.726 Area 837831

Q 463.00>418.90 (-) 3.01e5

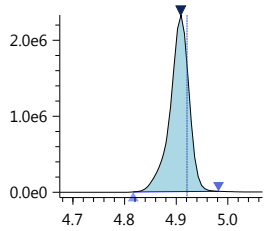


PFDA-13C_IS

Conc 5.0000

RT 4.909 Area 5938863

ISTD 514.80>469.95 (-) 2.33e6

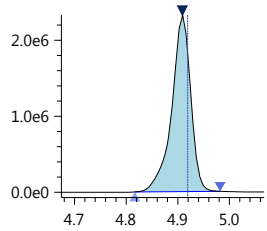


PFDA-13C

Conc 4.7283

RT 4.909 Area 5938863

Q 514.80>469.95 (-) 2.33e6

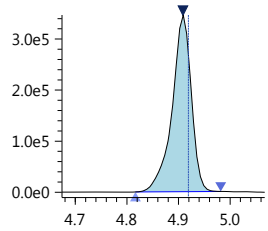


PFDA

Conc 0.9218

RT 4.908 Area 893337

Q 513.00>468.80 (-) 3.47e5

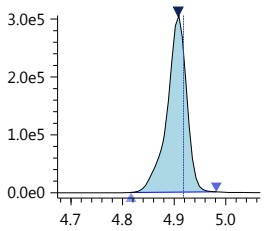


8_2-FTS-13C_IS

Conc 5.0000

RT 4.908 Area 802500

ISTD 528.80>509.00 (-) 3.06e5

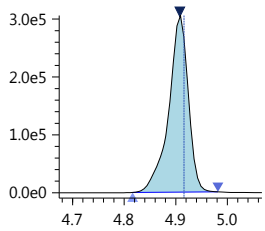


8_2-FTS-13C

Conc 5.1426

RT 4.908 Area 802500

Q 528.80>509.00 (-) 3.06e5



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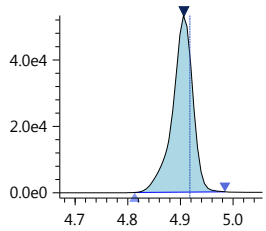
Conc 0.9239

RT 4.907 Area 141804

Q 527.10>506.90 (-) 5.34e4

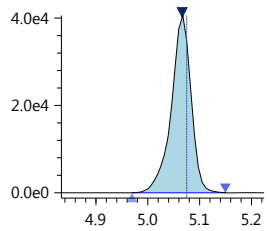


PFDS_1

Conc 1.0760

RT 5.066 Area 107682

Q 599.00>79.90 (-) 4.06e4

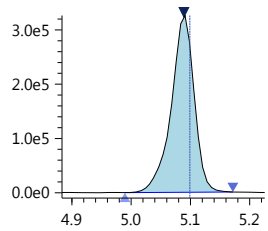


PFUnA

Conc 0.9770

RT 5.089 Area 878033

Q 563.00>518.90 (-) 3.27e5

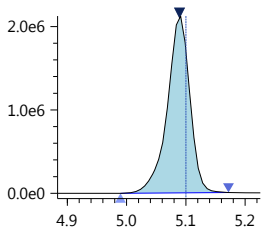


PFUnA-13C_IS

Conc 5.0000

RT 5.089 Area 5594689

ISTD 564.80>519.95 (-) 2.13e6

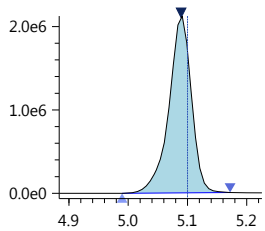


PFUnA-13C

Conc 4.9504

RT 5.089 Area 5594689

Q 564.80>519.95 (-) 2.13e6

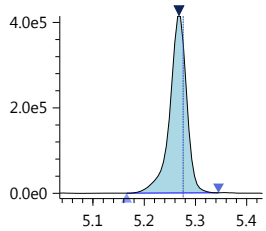


PFDoA

Conc 0.9487

RT 5.268 Area 955807

Q 613.05>569.00 (-) 4.15e5

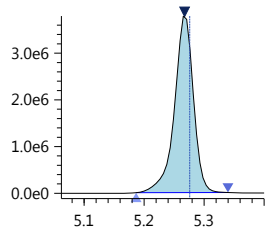


PFDoA-13C

Conc 5.0627

RT 5.267 Area 8334113

Q 614.80>569.95 (-) 3.80e6

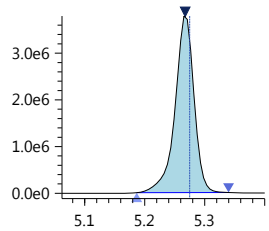


PFDoA-13C_IS

Conc 5.0000

RT 5.267 Area 8334113

ISTD 614.80>569.95 (-) 3.80e6

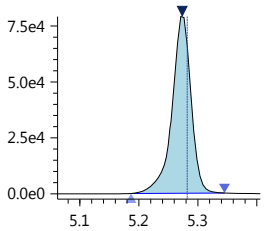


10_2-FtS_1

Conc 0.9635

RT 5.274 Area 177850

Q 627.00>606.95 (-) 7.92e4

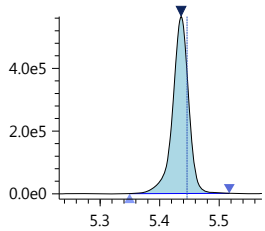


PFTrDA

Conc 0.9913

RT 5.436 Area 1055086

Q 663.00>618.90 (-) 5.65e5

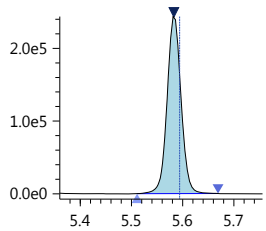


PFTeDA

Conc 0.9967

RT 5.583 Area 461723

Q 713.40>669.00 (-) 2.44e5

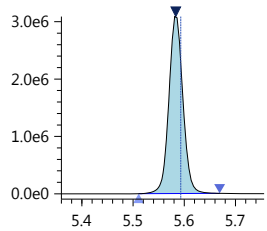


PFTeDA-13C

Conc 4.8273

RT 5.583 Area 5883759

Q 714.70>669.90 (-) 3.09e6

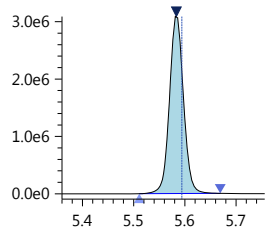


PFTeDA-13C_IS

Conc 5.0000

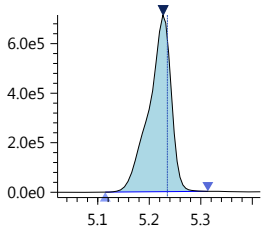
RT 5.583 Area 5883759

ISTD 714.70>669.90 (-) 3.09e6



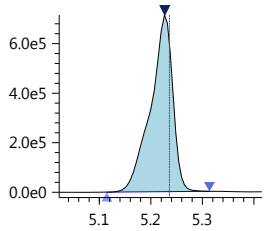
FOSA-13C_IS

Conc 5.0000
RT 5.227 Area 2126374
ISTD 506.00>78.05 (-) 7.16e5



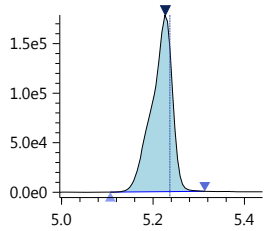
FOSA-13C

Conc 5.0291
RT 5.227 Area 2126374
Q 506.00>78.05 (-) 7.16e5



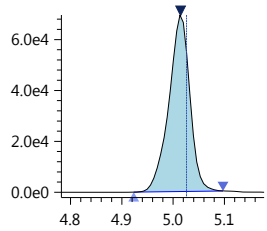
FOSA

Conc 0.9879
RT 5.227 Area 552221
Q 498.20>78.00 (-) 1.79e5



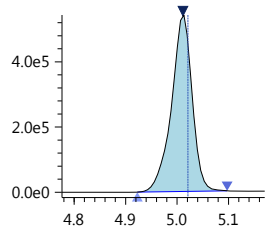
N-MeFOSAA

Conc 1.0617
RT 5.015 Area 197245
Q 570.20>419.00 (-) 6.97e4



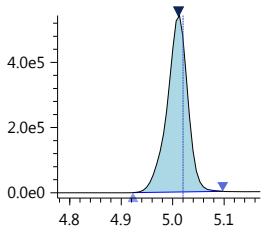
N-MeFOSAA-d3

Conc 4.8832
RT 5.011 Area 1506673
Q 572.80>419.05 (-) 5.44e5



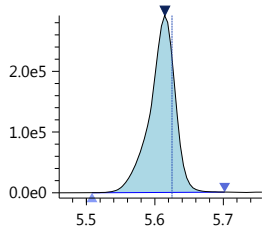
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.011 Area 1506673
ISTD 572.80>419.05 (-) 5.44e5



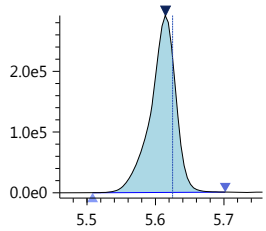
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.615 Area 739384
ISTD 514.90>168.90 (-) 2.92e5



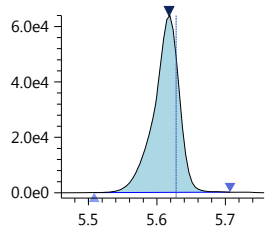
N-MeFOSA-d3

Conc 4.8121
RT 5.615 Area 739384
Q 514.90>168.90 (-) 2.92e5



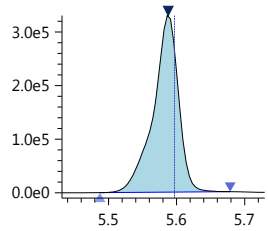
N-MeFOSA

Conc 0.9306
RT 5.618 Area 163025
Q 512.00>169.10 (-) 6.40e4



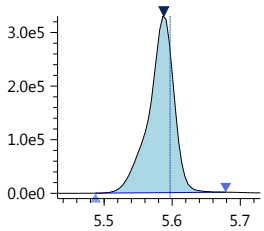
N-MeFOSE-d7

Conc 5.1759
RT 5.588 Area 841005
Q 622.70>59.10 (-) 3.31e5



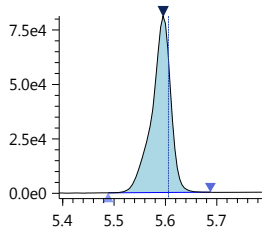
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.588 Area 841005
ISTD 622.70>59.10 (-) 3.31e5



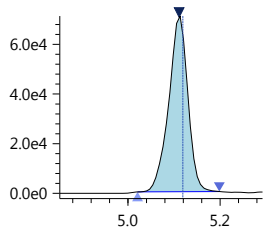
N-MeFOSE

Conc 0.9463
RT 5.596 Area 205567
Q 616.00>59.00 (-) 8.14e4



N-EtFOSAA

Conc 1.0950
RT 5.111 Area 204550
Q 584.20>418.95 (-) 7.14e4



N-EtFOSAA-d5_IS

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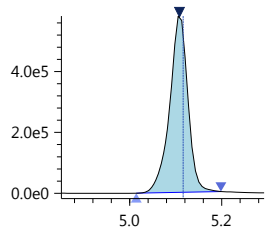
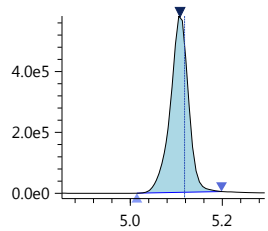
RT 5.108 Area 1597762
ISTD 588.80>419.00 (-) 5.82e5



N-EtFOSAA-d5

Conc 5.1907
RT 5.108 Area 1597762
Q 588.80>419.00 (-) 5.82e5



N-EtFOSA-d9_IS

Conc 5.0000
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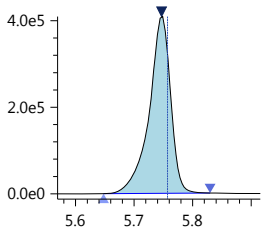
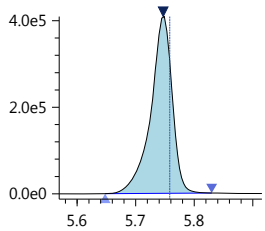
ISTD 530.90>169.15 (-) 4.10e5



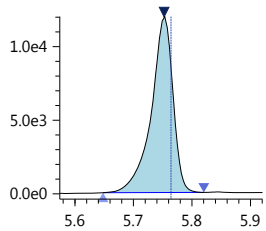
N-EtFOSA-d9

Conc 4.8832
RT 5.747 Area 1038897
Q 530.90>169.15 (-) 4.10e5



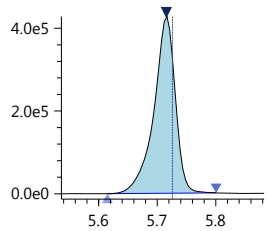
N-EtFOSA

Conc 0.8896
RT 5.752 Area 30804
Q 526.90>169.10 (-) 1.20e4



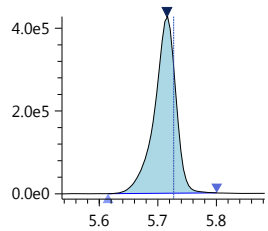
N-EtFOSE-d9_IS

Conc 5.0000
RT 5.716 Area 1083313
ISTD 638.70>59.10 (-) 4.28e5



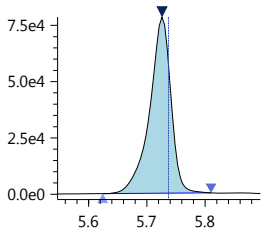
N-EtFOSE-d9

Conc 4.8304
RT 5.716 Area 1083313
Q 638.70>59.10 (-) 4.28e5



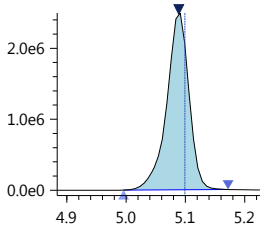
N-EtFOSE

Conc 0.9784
RT 5.726 Area 198606
Q 630.00>58.90 (-) 7.87e4



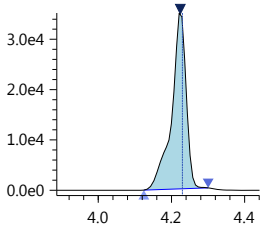
13C7-PFUnDA_IS

Conc 5.0000
RT 5.089 Area 6505045
ISTD 570.00>525.00 (-) 2.50e6



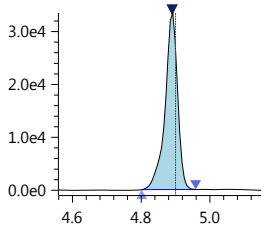
PFPeS

Conc 0.9500
RT 4.224 Area 96125
Q 349.00>99.00 (-) 3.52e4



PFNS

Conc 1.0031
RT 4.890 Area 84794
Q 549.00>99.00 (-) 3.35e4



190301_016

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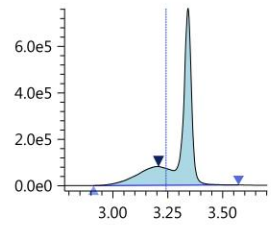
Date acquired: 3/1/2019 6:01:19 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_016.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

PFBA-13C_IS
Conc 5.0000
RT 3.208 Area 2794732
ISTD 216.90>172.15 (-) 7.64e5



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RT 3.208 Area 2794732
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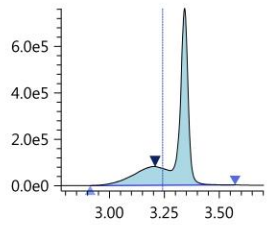
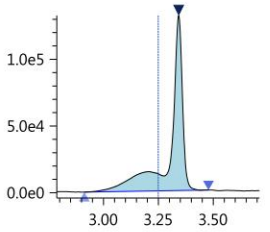
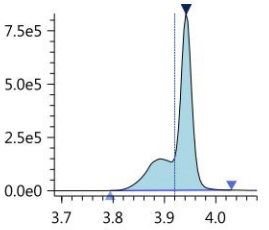


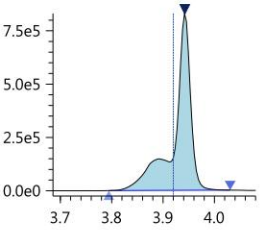
PFBA
Conc 0.9574
RT 3.342 Area 506805
Q 213.00>169.10 (-) 1.33e5



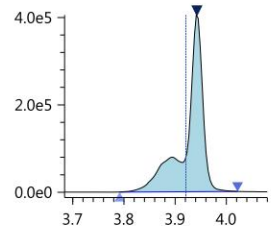
PFPeA-13C_IS
Conc 5.0000
RT 3.942 Area 1839368
ISTD 267.90>223.00 (-) 8.31e5



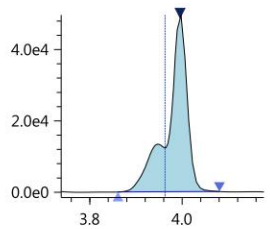
PFPeA-13C
Conc 4.8983
RT 3.942 Area 1839368
Q 267.90>223.00 (-) 8.31e5



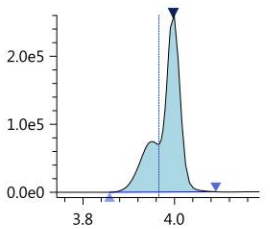
PFPeA
Conc 0.6797
RT 3.943 Area 919002
Q 263.05>219.10 (-) 4.06e5



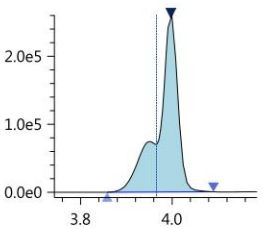
PFBS_1
Conc 0.9205
RT 3.995 Area 144763
Q 299.00>80.00 (-) 4.97e4



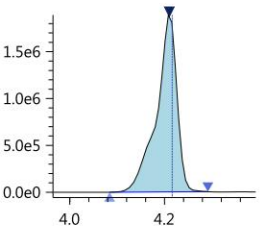
PFBS-13C
Conc 4.6049
RT 3.997 Area 781387
Q 301.80>80.00 (-) 2.61e5



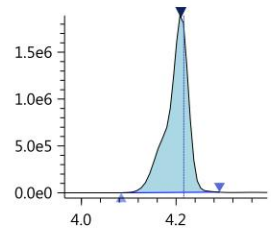
PFBS-13C_IS
Conc 5.0000
RT 3.997 Area 781387
ISTD 301.80>80.00 (-) 2.61e5



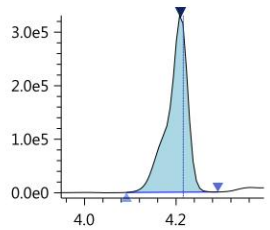
PFHxA-13C_IS
Conc 5.0000
RT 4.210 Area 5606245
ISTD 314.90>270.10 (-) 1.89e6



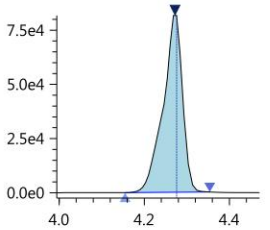
PFHxA-13C
Conc 4.8413
RT 4.210 Area 5606245
Q 314.90>270.10 (-) 1.89e6



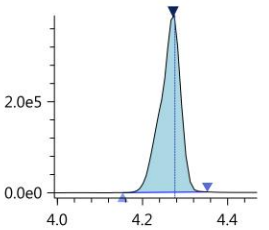
PFHxA
Conc 0.8459
RT 4.210 Area 982339
Q 313.00>269.00 (-) 3.31e5



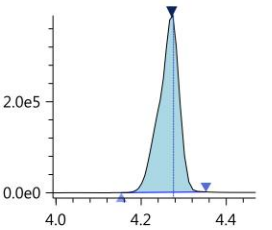
HPFO_DA
Conc 0.9486
RT 4.272 Area 258798
Q 329.00>169.00 (-) 8.18e4



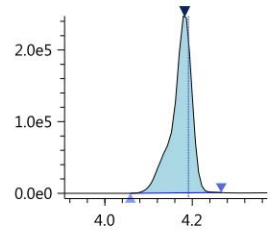
HFPO_DA-13C_IS
Conc 5.0000
RT 4.272 Area 1271307
ISTD 332.00>286.80 (-) 3.89e5



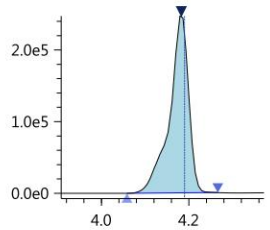
HFPO_DA-13C
Conc 5.0560
RT 4.272 Area 1271307
Q 332.00>286.80 (-) 3.89e5



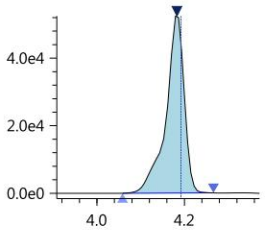
4_2-FTS-13C_IS
Conc 5.0000
RT 4.183 Area 744276
ISTD 328.80>309.05 (-) 2.47e5



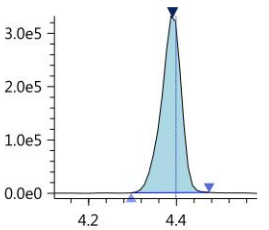
4_2-FTS-13C
Conc 4.9229
RT 4.183 Area 744276
Q 328.80>309.05 (-) 2.47e5



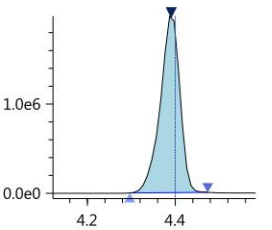
4_2-FTS_1
Conc 0.8952
RT 4.183 Area 152153
Q 327.00>307.05 (-) 5.25e4



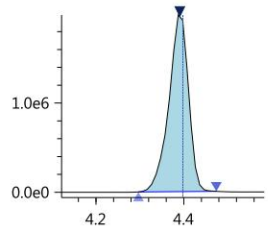
PFHpA
Conc 0.9093
RT 4.391 Area 1059091
Q 362.90>319.00 (-) 3.33e5



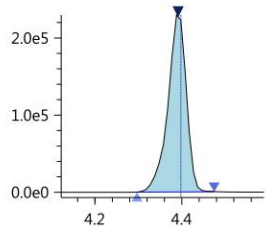
PFHpA-13C_IS
Conc 5.0000
RT 4.391 Area 6185071
ISTD 366.90>322.10 (-) 1.99e6



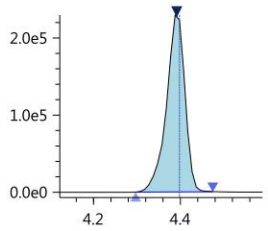
PFHpA-13C
Conc 5.1932
RT 4.391 Area 6185071
Q 366.90>322.10 (-) 1.99e6



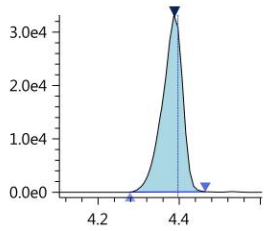
PFHxS-18O_IS
Conc 5.0000
RT 4.392 Area 679512
ISTD 402.70>84.05 (-) 2.30e5



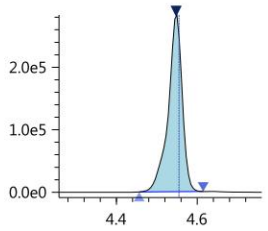
PFHxS-18O
Conc 5.8217
RT 4.392 Area 679512
Q 402.70>84.05 (-) 2.30e5



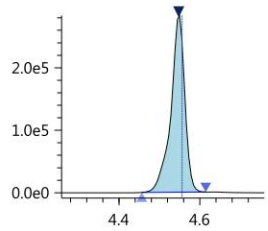
PFHxS_1
Conc 0.8179
RT 4.389 Area 115480
Q 399.00>80.00 (-) 3.32e4



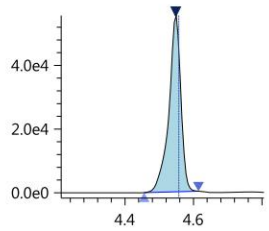
6_2-FTS-13C
Conc 5.0804
RT 4.548 Area 679499
Q 428.90>409.00 (-) 2.84e5



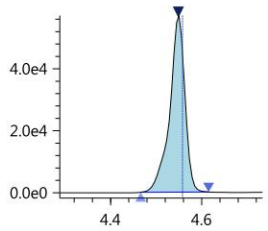
6_2-FTS-13C_IS
Conc 5.0000
RT 4.548 Area 679499
ISTD 428.90>409.00 (-) 2.84e5



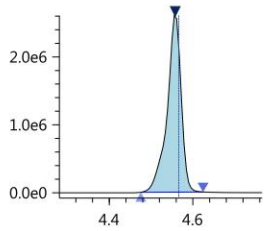
6_2-FTS_1
Conc 0.9595
RT 4.548 Area 134372
Q 427.00>407.00 (-) 5.57e4



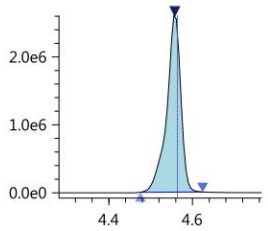
PFHpS_1
Conc 0.7911
RT 4.549 Area 132179
Q 449.00>80.15 (-) 5.72e4



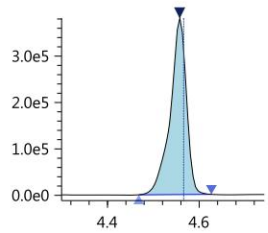
PFOA-13C_IS
Conc 5.0000
RT 4.558 Area 6092833
ISTD 416.80>372.05 (-) 2.61e6



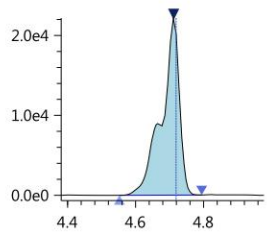
PFOA-13C
Conc 5.1324
RT 4.558 Area 6092833
Q 416.80>372.05 (-) 2.61e6



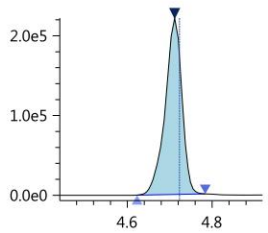
PFOA
Conc 0.8308
RT 4.557 Area 931939
Q 413.00>369.00 (-) 3.82e5



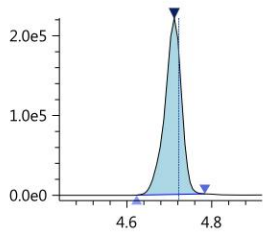
PFOS_1
Conc 0.9884
RT 4.712 Area 80625
Q 499.00>80.00 (-) 2.22e4



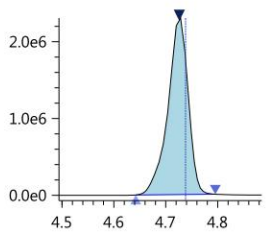
PFOS-13C_IS
Conc 5.0000
RT 4.711 Area 603871
ISTD 502.80>80.05 (-) 2.22e5



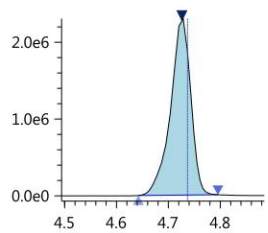
PFOS-13C
Conc 4.3607
RT 4.711 Area 603871
Q 502.80>80.05 (-) 2.22e5



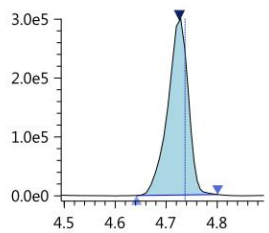
PFNA-13C_IS
Conc 5.0000
RT 4.726 Area 6236601
ISTD 467.80>423.00 (-) 2.31e6



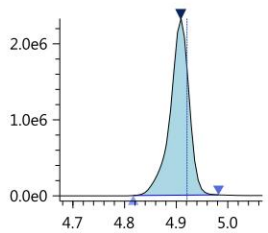
PFNA-13C
Conc 4.6840
RT 4.726 Area 6236601
Q 467.80>423.00 (-) 2.31e6



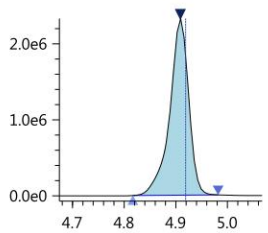
PFNA
Conc 0.9220
RT 4.726 Area 837831
Q 463.00>418.90 (-) 3.01e5



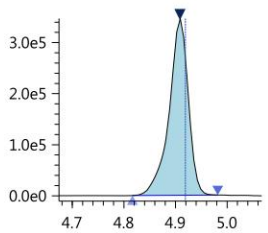
PFDA-13C_IS
Conc 5.0000
RT 4.909 Area 5938863
ISTD 514.80>469.95 (-) 2.33e6



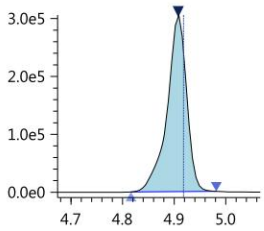
PFDA-13C
Conc 4.7283
RT 4.909 Area 5938863
Q 514.80>469.95 (-) 2.33e6



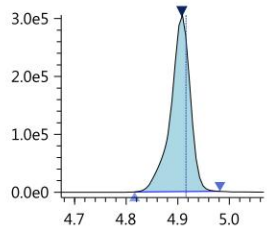
PFDA
Conc 0.9218
RT 4.908 Area 893337
Q 513.00>468.80 (-) 3.47e5



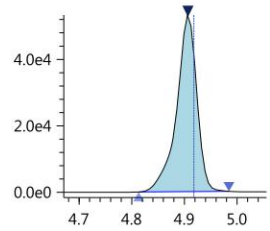
8_2-FTS-13C_IS
Conc 5.0000
RT 4.908 Area 802500
ISTD 528.80>509.00 (-) 3.06e5



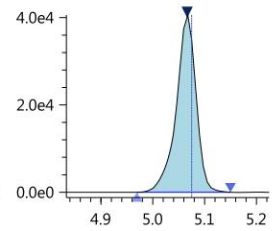
8_2-FTS-13C
Conc 5.1426
RT 4.908 Area 802500
Q 528.80>509.00 (-) 3.06e5



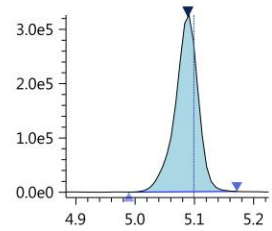
8_2-FTS_1
Conc 0.9344
RT 4.907 Area 141804
Q 527.10>506.90 (-) 5.34e4



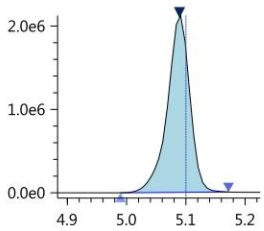
PFDS_1
Conc 1.1430
RT 5.066 Area 107682
Q 599.00>79.90 (-) 4.06e4



PFUnA
Conc 0.8425
RT 5.089 Area 878033
Q 563.00>518.90 (-) 3.27e5



PFUnA-13C_IS
Conc 5.0000
RT 5.089 Area 5594689
ISTD 564.80>519.95 (-) 2.13e6



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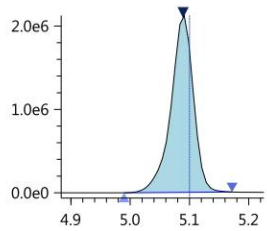
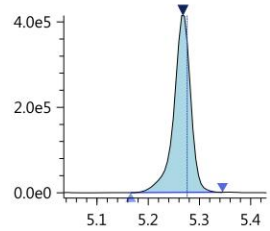
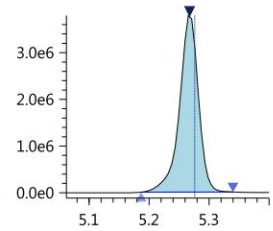
Conc 4.9504
RT 5.089 Area 5594689
Q 564.80>519.95 (-) 2.13e6



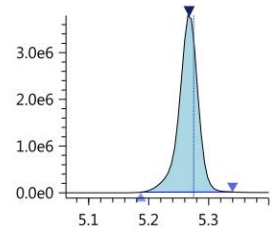
PFDoA
Conc 0.9175
RT 5.268 Area 955807
Q 613.05>569.00 (-) 4.15e5



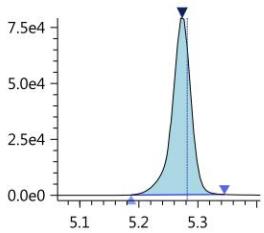
PFDoA-13C
Conc 5.0627
RT 5.267 Area 8334113
Q 614.80>569.95 (-) 3.80e6



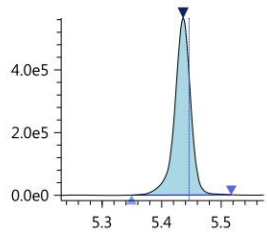
PFDoA-13C_IS
Conc 5.0000
RT 5.267 Area 8334113
ISTD 614.80>569.95 (-) 3.80e6



10_2-FtS_1
Conc 0.9635
RT 5.274 Area 177850
Q 627.00>606.95 (-) 7.92e4



PFTrDA
Conc 0.9403
RT 5.436 Area 1055086
Q 663.00>618.90 (-) 5.65e5



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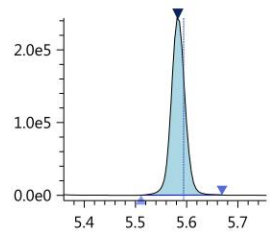
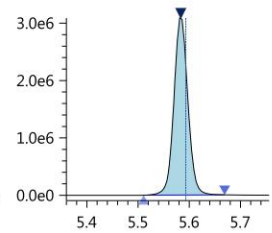
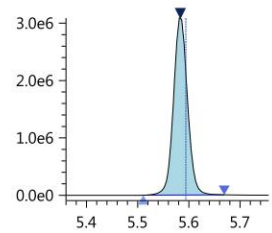
RT 5.583 Area 461723
Q 713.40>669.00 (-) 2.44e5



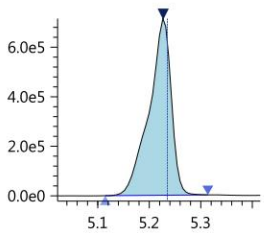
PFTeDA-13C
Conc 4.8273
RT 5.583 Area 5883759
Q 714.70>669.90 (-) 3.09e6



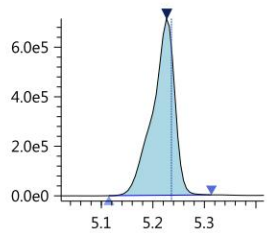
PFTeDA-13C_IS
Conc 5.0000
RT 5.583 Area 5883759
ISTD 714.70>669.90 (-) 3.09e6



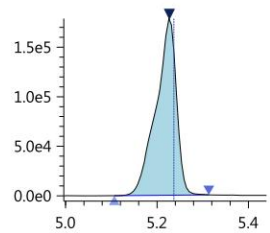
FOSA-13C_IS
Conc 5.0000
RT 5.227 Area 2126374
ISTD 506.00>78.05 (-) 7.16e5



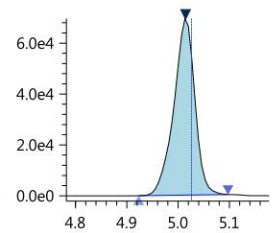
FOSA-13C
Conc 5.0291
RT 5.227 Area 2126374
Q 506.00>78.05 (-) 7.16e5



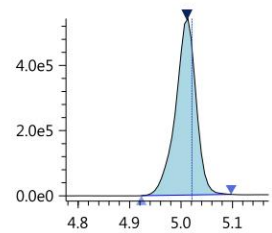
FOSA
Conc 0.9879
RT 5.227 Area 552221
Q 498.20>78.00 (-) 1.79e5



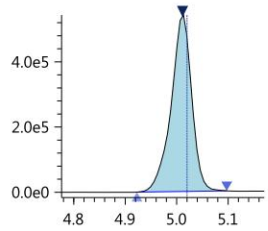
N-MeFOSAA
Conc 1.0715
RT 5.015 Area 197245
Q 570.20>419.00 (-) 6.97e4



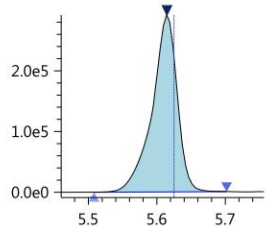
N-MeFOSAA-d3
Conc 4.8832
RT 5.011 Area 1506673
Q 572.80>419.05 (-) 5.44e5



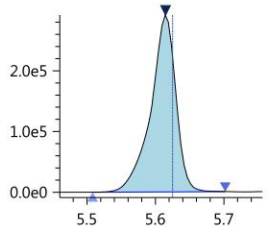
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.011 Area 1506673
ISTD 572.80>419.05 (-) 5.44e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.615 Area 739384
ISTD 514.90>168.90 (-) 2.92e5



N-MeFOSA-d3
Conc 4.8121
RT 5.615 Area 739384
Q 514.90>168.90 (-) 2.92e5



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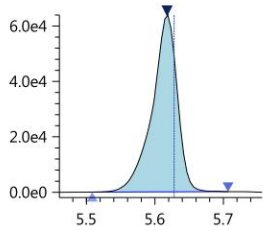
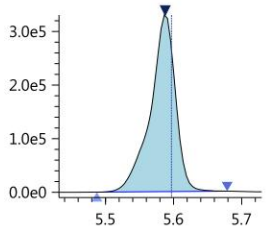
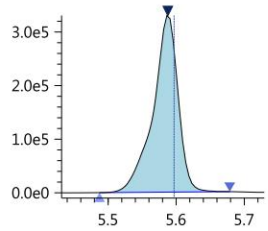
Conc 0.9306
RT 5.618 Area 163025
Q 512.00>169.10 (-) 6.40e4



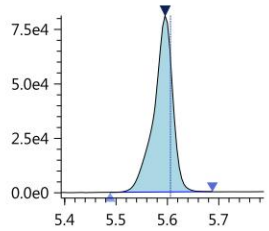
N-MeFOSE-d7
Conc 5.1759
RT 5.588 Area 841005
Q 622.70>59.10 (-) 3.31e5



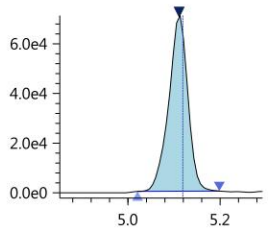
N-MeFOSE-d7_IS
Conc 5.0000
RT 5.588 Area 841005
ISTD 622.70>59.10 (-) 3.31e5



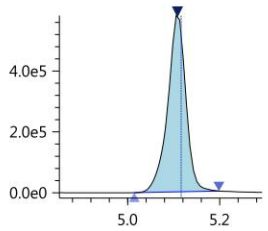
N-MeFOSE
Conc 0.9463
RT 5.596 Area 205567
Q 616.00>59.00 (-) 8.14e4



N-EtFOSAA
Conc 1.0778
RT 5.111 Area 204550
Q 584.20>418.95 (-) 7.14e4



N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.108 Area 1597762
ISTD 588.80>419.00 (-) 5.82e5



N-EtFOSAA-d5
Conc 5.1907
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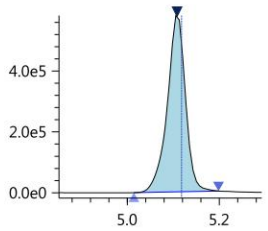
Q 588.80>419.00 (-) 5.82e5



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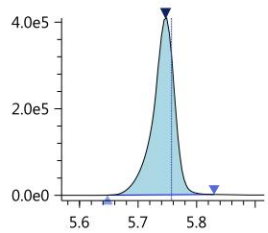
Conc 5.0000
RT 5.747 Area 1038897
ISTD 530.90>169.15 (-) 4.10e5



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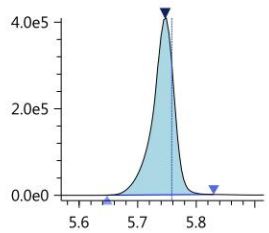
RT 5.747 Area 1038897
Q 530.90>169.15 (-) 4.10e5



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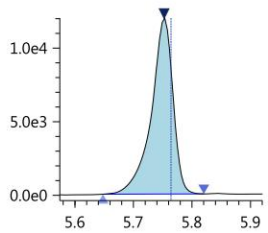
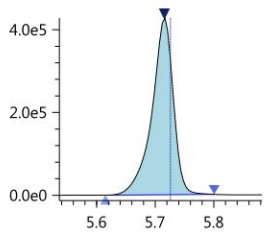
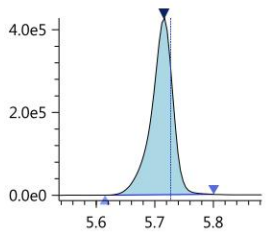
RT 5.752 Area 30804
Q 526.90>169.10 (-) 1.20e4



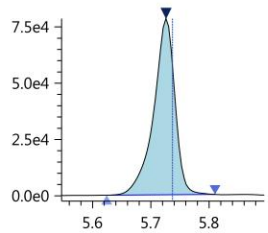
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.716 Area 1083313
ISTD 638.70>59.10 (-) 4.28e5



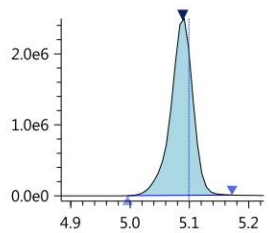
N-EtFOSE-d9
Conc 4.8304
RT 5.716 Area 1083313
Q 638.70>59.10 (-) 4.28e5



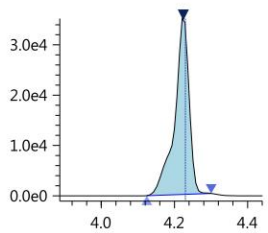
N-EtFOSE
Conc 0.9729
RT 5.726 Area 198606
Q 630.00>58.90 (-) 7.87e4



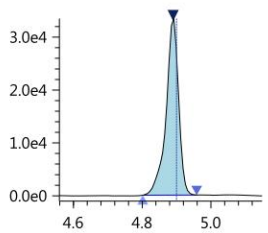
13C7-PFUnDA_IS
Conc 5.0000
RT 5.089 Area 6505045
ISTD 570.00>525.00 (-) 2.50e6



PFPeS
Conc 0.9584
RT 4.224 Area 96125
Q 349.00>99.00 (-) 3.52e4



PFNS
Conc 1.0126
RT 4.890 Area 84794
Q 549.00>99.00 (-) 3.35e4



190301_017

Sample ID: IB
Date acquired: 3/1/2019 6:11:46 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_017.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 1

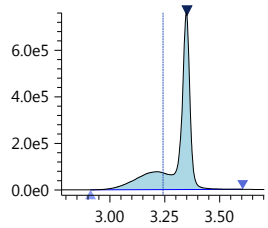
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	Auto	3.351	2758474	2758474	2	5.0000	ng/mL	----
PFBA-13C	Auto	3.351	2758474	6216152	26	4.9832	ng/mL	----
PFBA	ND(W/B)	----	----	2758474	2	----	ng/mL	----
PFPeA-13C_IS	Auto	3.950	1793826	1793826	4	5.0000	ng/mL	----
PFPeA-13C	Auto	3.950	1793826	6216152	26	4.9990	ng/mL	----
PFPeA	Auto	3.950	97452	1793826	4	-0.0082	ng/mL	----
PFBS_1	ND(W/B)	----	----	766060	16	----	ng/mL	----
PFBS-13C	Auto	4.003	766060	6216152	26	4.7244	ng/mL	----
PFBS-13C_IS	Auto	4.003	766060	766060	16	5.0000	ng/mL	----
PFHxA-13C_IS	Auto	4.217	5519476	5519476	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.217	5519476	6216152	26	4.9879	ng/mL	----
PFHxA	M	4.186	34900	5519476	6	0.0003	ng/mL	----
HPFO_DA	ND(W/B)	----	----	1212709	3	----	ng/mL	----
HFPO_DA-13C_IS	Auto	4.278	1212709	1212709	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.278	1212709	6216152	26	5.0471	ng/mL	----
4_2-FTS-13C_IS	Auto	4.191	722426	722426	5	5.0000	ng/mL	----
4_2-FTS-13C	Auto	4.191	722426	6216152	26	5.0004	ng/mL	----
4_2-FTS_1	Auto	4.191	334	722426	5	0.0020	ng/mL	----
PFHpA	Auto	4.380	20140	6569994	8	-0.0204	ng/mL	----
PFHpA-13C_IS	Auto	4.400	6569994	6569994	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.400	6569994	6216152	26	5.7727	ng/mL	----
PFHxS-18O_IS	Auto	4.400	590001	590001	7	5.0000	ng/mL	----
PFHxS-18O	Auto	4.400	590001	6216152	26	5.2897	ng/mL	----
PFHxS_1	Auto	4.394	1418	590001	7	0.0110	ng/mL	----
6_2-FTS-13C	Auto	4.556	686698	6216152	26	5.3728	ng/mL	----
6_2-FTS-13C_IS	Auto	4.556	686698	686698	10	5.0000	ng/mL	----
6_2-FTS_1	M	4.539	195	806319	15	0.0013	ng/mL	----
PFHpS_1	ND(W/B)	----	----	590001	7	----	ng/mL	----
PFOA-13C_IS	Auto	4.565	6036650	6036650	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.565	6036650	6216152	26	5.3214	ng/mL	----
PFOA	M	4.551	23941	6036650	9	-0.0013	ng/mL	----
PFOS_1	Auto	4.718	231	619366	13	0.0027	ng/mL	----
PFOS-13C_IS	Auto	4.719	619366	619366	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.719	619366	6216152	26	4.6804	ng/mL	----
PFNA-13C_IS	Auto	4.734	6566496	6566496	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.734	6566496	6216152	26	5.1610	ng/mL	----
PFNA	Auto	4.717	16860	6566496	11	0.0020	ng/mL	----
PFDA-13C_IS	Auto	4.917	6124447	6124447	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.917	6124447	6216152	26	5.1026	ng/mL	----
PFDA	M	4.900	15435	6124447	12	0.0154	ng/mL	----
8_2-FTS-13C_IS	Auto	4.915	806319	806319	15	5.0000	ng/mL	----
8_2-FTS-13C	Auto	4.915	806319	6216152	26	5.4072	ng/mL	----
8_2-FTS_1	Auto	4.909	126	806319	15	0.0008	ng/mL	----
PFDS_1	ND(W/B)	----	----	619366	13	----	ng/mL	----
PFUnA	Auto	5.089	22479	5507779	14	-0.0138	ng/mL	----
PFUnA-13C_IS	Auto	5.099	5507779	5507779	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.099	5507779	6216152	26	5.1000	ng/mL	----
PFDoA	Auto	5.273	16435	7630559	17	0.0078	ng/mL	----
PFDoA-13C	Auto	5.282	7630559	6216152	26	4.8507	ng/mL	----
PFDoA-13C_IS	Auto	5.282	7630559	7630559	17	5.0000	ng/mL	----
10_2-FtS_1	M	5.290	93	806319	15	0.0005	ng/mL	----
PFTrDA	Auto	5.443	16998	6139916	22	0.0014	ng/mL	----
PFTeDA	Auto	5.594	54647	6139916	22	-0.0106	ng/mL	----
PFTeDA-13C	Auto	5.593	6139916	6216152	26	5.2715	ng/mL	----
PFTeDA-13C_IS	Auto	5.593	6139916	6139916	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.241	2045532	2045532	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.241	2045532	6216152	26	5.0628	ng/mL	----
FOSA	M	5.243	1134	2045532	18	0.0021	ng/mL	----
N-MeFOSAA	Auto	5.023	2215	1572909	19	0.0114	ng/mL	----
N-MeFOSAA-d3	Auto	5.021	1572909	6216152	26	5.3348	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.021	1572909	1572909	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.624	754894	754894	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.624	754894	6216152	26	5.1414	ng/mL	----
N-MeFOSA	Auto	5.625	1060	754894	1	0.0059	ng/mL	----
N-MeFOSE-d7	Auto	5.598	834080	6216152	26	5.3719	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.598	834080	834080	20	5.0000	ng/mL	----
N-MeFOSE	ND(W/B)	----	----	834080	20	----	ng/mL	----

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	M	5.123	1652	1540757	21	0.0092	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.117	1540757	1540757	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.117	1540757	6216152	26	5.2382	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.758	1042019	1042019	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.758	1042019	6216152	26	5.1255	ng/mL	----
N-EtFOSA	ND(W/B)	----	----	1042019	23	----	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.726	1081669	1081669	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.726	1081669	6216152	26	5.0472	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	1081669	24	----	ng/mL	----
13C7-PFUnDA_IS	Auto	5.099	6216152	6216152	26	5.0000	ng/mL	----
PFPeS	Auto	4.236	87	766060	16	0.0009	ng/mL	----
PFNS	ND(W/B)	----	----	619366	13	----	ng/mL	----

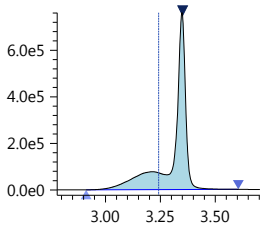
PFBA-13C_IS

Conc 5.0000
RT 3.351 Area 2758474
ISTD 216.90>172.15 (-) 7.61e5



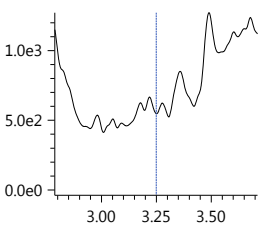
PFBA-13C

Conc 4.9832
RT 3.351 Area 2758474
Q 216.90>172.15 (-) 7.61e5



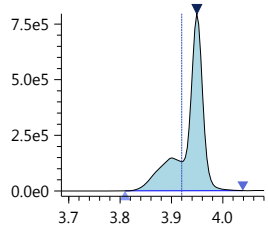
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.27e3



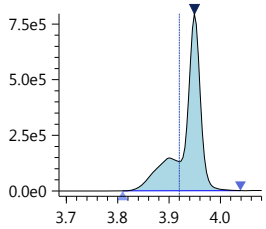
PFPeA-13C_IS

Conc 5.0000
RT 3.950 Area 1793826
ISTD 267.90>223.00 (-) 7.96e5



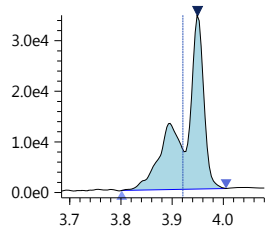
PFPeA-13C

Conc 4.9990
RT 3.950 Area 1793826
Q 267.90>223.00 (-) 7.96e5



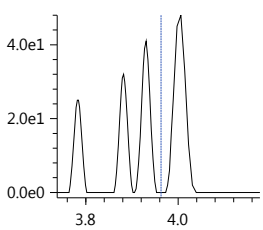
PFPeA

Conc -0.0082
RT 3.950 Area 97452
Q 263.05>219.10 (-) 3.50e4



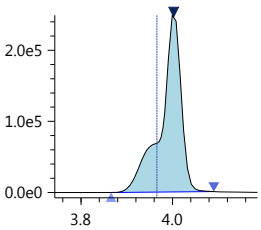
PFBS_1

Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 4.80e1



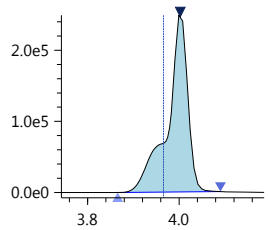
PFBS-13C

Conc 4.7244
RT 4.003 Area 766060
Q 301.80>80.00 (-) 2.49e5



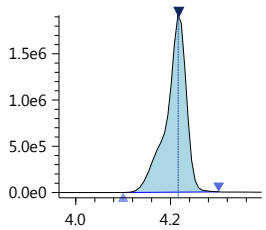
PFBS-13C_IS

Conc 5.0000
RT 4.003 Area 766060
ISTD 301.80>80.00 (-) 2.49e5



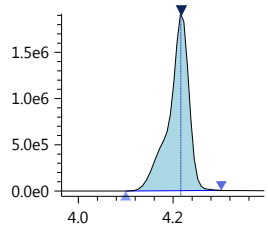
PFHxA-13C_IS

Conc 5.0000
RT 4.217 Area 5519476
ISTD 314.90>270.10 (-) 1.92e6



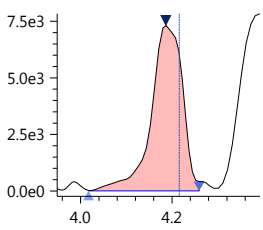
PFHxA-13C

Conc 4.9879
RT 4.217 Area 5519476
Q 314.90>270.10 (-) 1.92e6



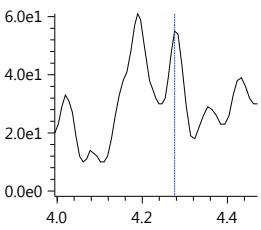
PFHxA

Conc 0.0003
RT 4.186 Area 34900
Q 313.00>269.00 (-) 7.83e3



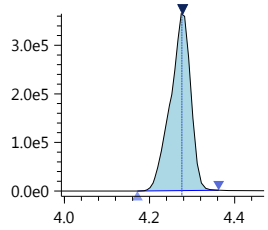
HPFO_DA

Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 6.10e1



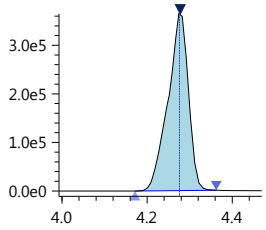
HFPO_DA-13C_IS

Conc 5.0000
RT 4.278 Area 1212709
ISTD 332.00>286.80 (-) 3.65e5

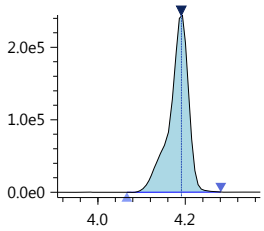


HFPO_DA-13C

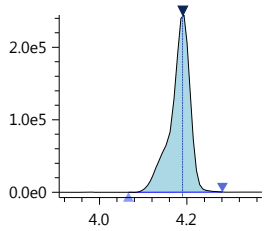
Conc 5.0471
RT 4.278 Area 1212709
Q 332.00>286.80 (-) 3.65e5



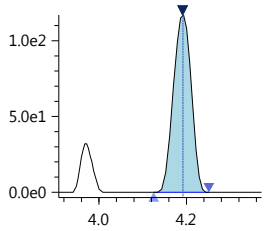
4_2-FTS-13C_IS
Conc 5.0000
RT 4.191 Area 722426
ISTD 328.80>309.05 (-) 2.45e5



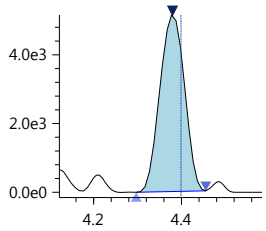
4_2-FTS-13C
Conc 5.0004
RT 4.191 Area 722426
Q 328.80>309.05 (-) 2.45e5



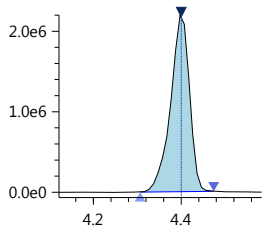
4_2-FTS_1
Conc 0.0020
RT 4.191 Area 334
Q 327.00>307.05 (-) 1.17e2



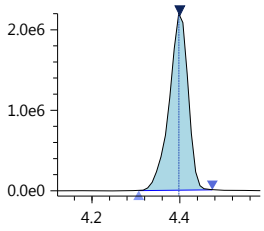
PFHpA
Conc -0.0204
RT 4.380 Area 20140
Q 362.90>319.00 (-) 5.16e3



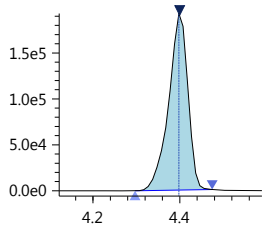
PFHpA-13C_IS
Conc 5.0000
RT 4.400 Area 6569994
ISTD 366.90>322.10 (-) 2.20e6



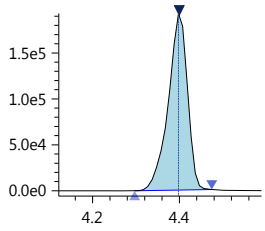
PFHpA-13C
Conc 5.7727
RT 4.400 Area 6569994
Q 366.90>322.10 (-) 2.20e6



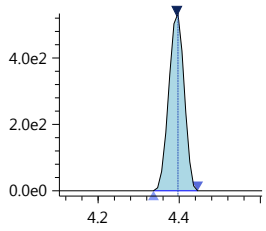
PFHxS-18O_IS
Conc 5.0000
RT 4.400 Area 590001
ISTD 402.70>84.05 (-) 1.93e5



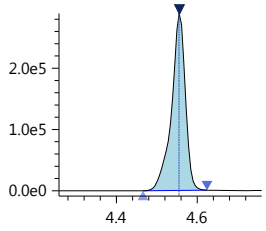
PFHxS-18O
Conc 5.2897
RT 4.400 Area 590001
Q 402.70>84.05 (-) 1.93e5



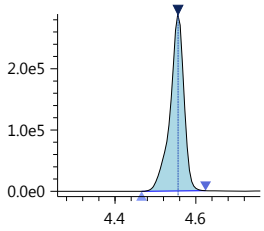
PFHxS_1
Conc 0.0110
RT 4.394 Area 1418
Q 399.00>80.00 (-) 5.34e2



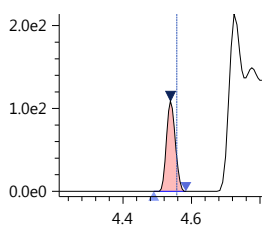
6_2-FTS-13C
Conc 5.3728
RT 4.556 Area 686698
Q 428.90>409.00 (-) 2.89e5



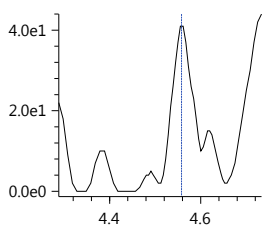
6_2-FTS-13C_IS
Conc 5.0000
RT 4.556 Area 686698
ISTD 428.90>409.00 (-) 2.89e5



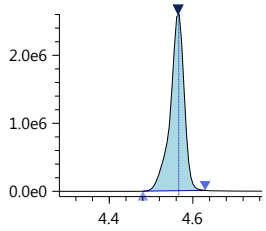
6_2-FTS_1
Conc 0.0013
RT 4.539 Area 195
Q 427.00>407.00 (-) 2.14e2



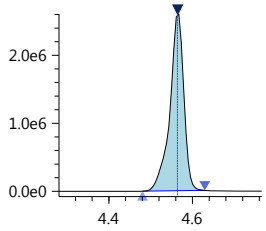
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 4.40e1



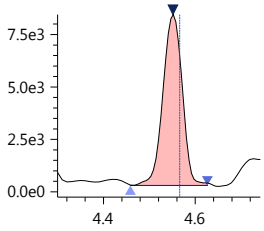
PFOA-13C_IS
Conc 5.0000
RT 4.565 Area 6036650
ISTD 416.80>372.05 (-) 2.61e6



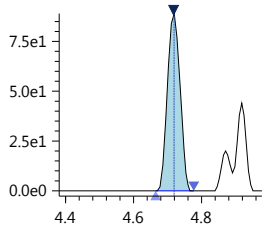
PFOA-13C
Conc 5.3214
RT 4.565 Area 6036650
Q 416.80>372.05 (-) 2.61e6



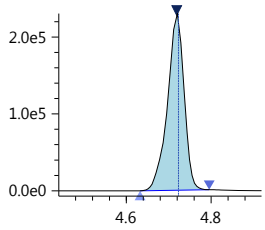
PFOA
Conc -0.0013
RT 4.551 Area 23941
Q 413.00>369.00 (-) 8.45e3



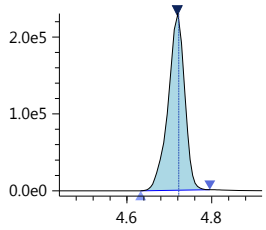
PFOS_1
Conc 0.0027
RT 4.718 Area 231
Q 499.00>80.00 (-) 8.90e1



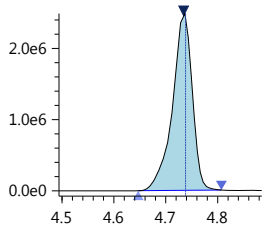
PFOS-13C_IS
Conc 5.0000
RT 4.719 Area 619366
ISTD 502.80>80.05 (-) 2.31e5



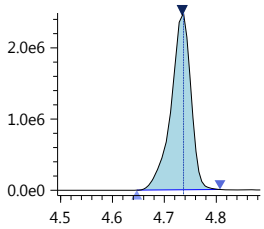
PFOS-13C
Conc 4.6804
RT 4.719 Area 619366
Q 502.80>80.05 (-) 2.31e5



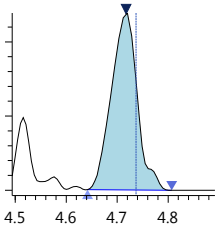
PFNA-13C_IS
Conc 5.0000
RT 4.734 Area 6566496
ISTD 467.80>423.00 (-) 2.49e6



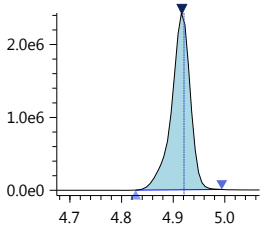
PFNA-13C
Conc 5.1610
RT 4.734 Area 6566496
Q 467.80>423.00 (-) 2.49e6



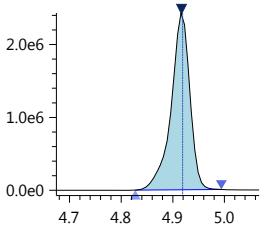
PFNA
Conc 0.0020
RT 4.717 Area 16860
Q 463.00>418.90 (-) 4.78e3



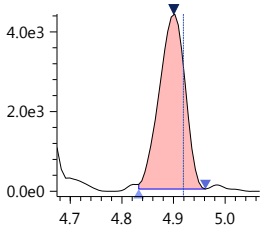
PFDA-13C_IS
Conc 5.0000
RT 4.917 Area 6124447
ISTD 514.80>469.95 (-) 2.43e6



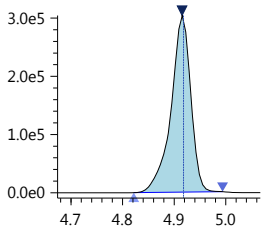
PFDA-13C
Conc 5.1026
RT 4.917 Area 6124447
Q 514.80>469.95 (-) 2.43e6



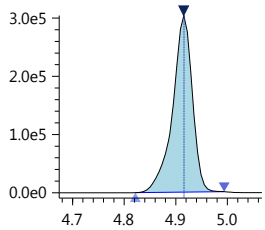
PFDA
Conc 0.0154
RT 4.900 Area 15435
Q 513.00>468.80 (-) 4.45e3



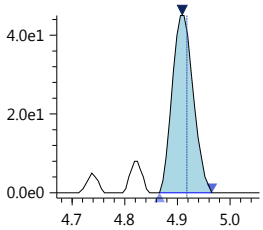
8_2-FTS-13C_IS
Conc 5.0000
RT 4.915 Area 806319
ISTD 528.80>509.00 (-) 3.04e5



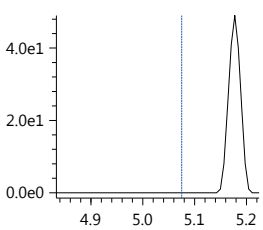
8_2-FTS-13C
Conc 5.4072
RT 4.915 Area 806319
Q 528.80>509.00 (-) 3.04e5



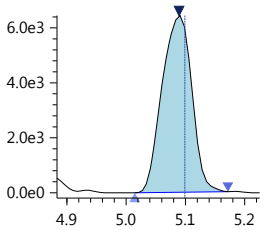
8_2-FTS_1
Conc 0.0008
RT 4.909 Area 126
Q 527.10>506.90 (-) 4.50e1



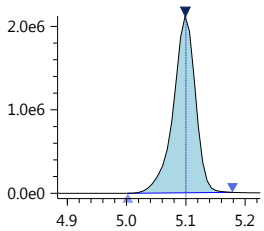
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 4.90e1



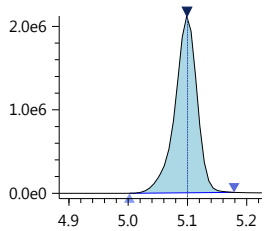
PFUnA
Conc -0.0138
RT 5.089 Area 22479
Q 563.00>518.90 (-) 6.45e3



PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5507779
ISTD 564.80>519.95 (-) 2.12e6



PFUnA-13C
Conc 5.1000
RT 5.099 Area 5507779
Q 564.80>519.95 (-) 2.12e6



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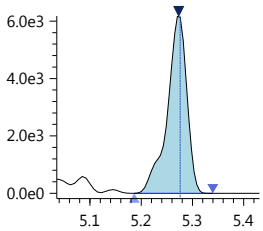
Conc 0.0078
RT 5.273 Area 16435
Q 613.05>569.00 (-) 6.18e3



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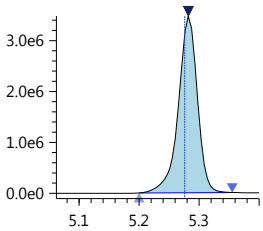

PFDoA-13C_IS
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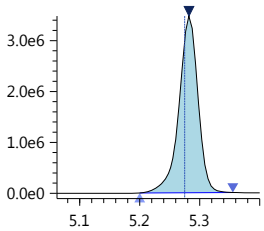
RT 5.282 Area 7630559
ISTD 614.80>569.95 (-) 3.48e6



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Conc 0.0005
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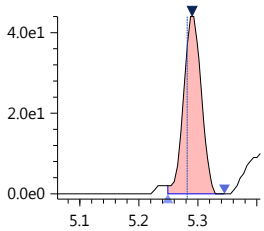
Q 627.00>606.95 (-) 4.40e1



PFTrDA
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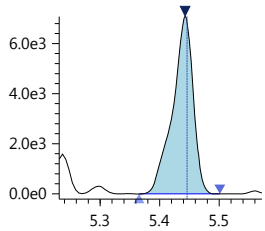
Q 663.00>618.90 (-) 7.08e3



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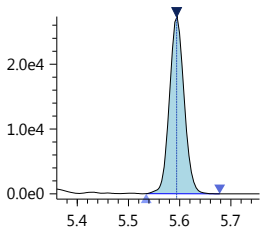
Conc -0.0106
RT 5.594 Area 54647
Q 713.40>669.00 (-) 2.73e4



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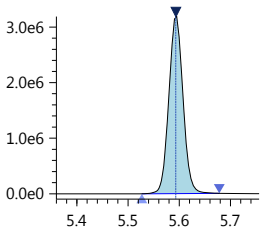
Q 714.70>669.90 (-) 3.19e6



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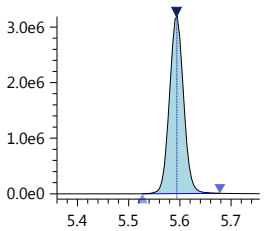

FOSA-13C_IS
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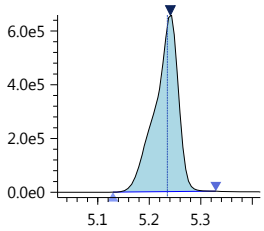

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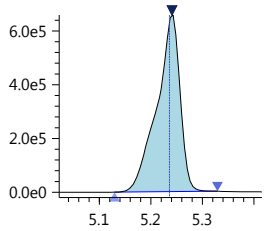
Q 506.00>78.05 (-) 6.59e5



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Conc 0.0021
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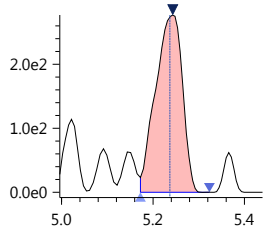
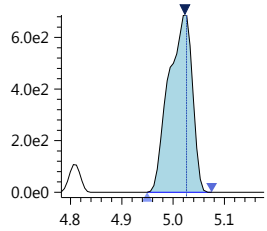
Q 498.20>78.00 (-) 2.77e2



N-MeFOSAA
Conc 0.0114
RT 5.023 Area 2215
Q 570.20>419.00 (-) 6.87e2



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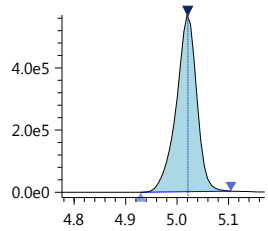
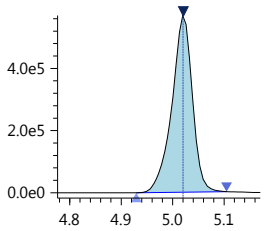
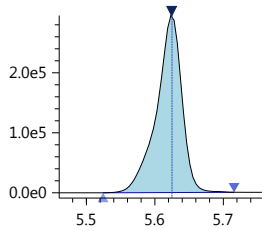
Conc 5.3348
RT 5.021 Area 1572909
Q 572.80>419.05 (-) 5.70e5



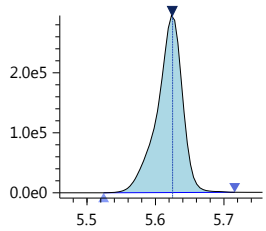
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.021 Area 1572909
ISTD 572.80>419.05 (-) 5.70e5



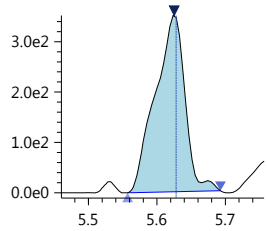
N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 754894
ISTD 514.90>168.90 (-) 2.95e5



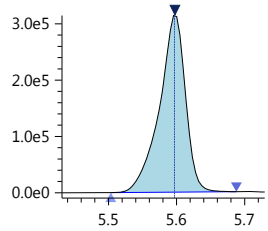
N-MeFOSA-d3
Conc 5.1414
RT 5.624 Area 754894
Q 514.90>168.90 (-) 2.95e5



N-MeFOSA
Conc 0.0059
RT 5.625 Area 1060
Q 512.00>169.10 (-) 3.52e2



N-MeFOSE-d7
Conc 5.3719
RT 5.598 Area 834080
Q 622.70>59.10 (-) 3.15e5



N-MeFOSE-d7_IS
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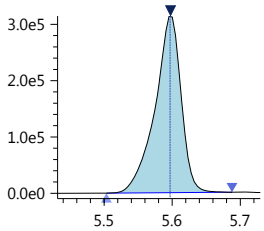
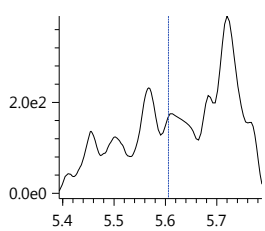
RT 5.598 Area 834080
ISTD 622.70>59.10 (-) 3.15e5



N-MeFOSE
Conc ----
RT ---- Area ----
Q 616.00>59.00 (-) 3.90e2



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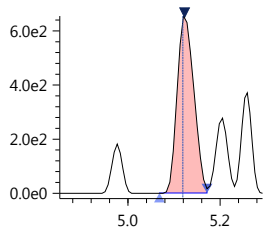
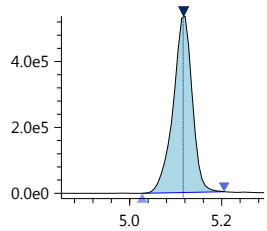
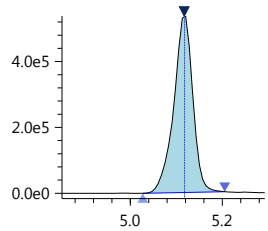
RT 5.123 Area 1652
Q 584.20>418.95 (-) 6.55e2



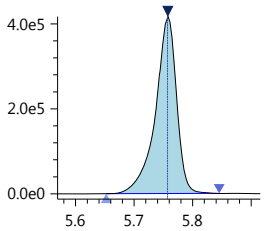
N-EtFOSAA-d5_IS
Conc 5.0000
RT 5.117 Area 1540757
ISTD 588.80>419.00 (-) 5.38e5



N-EtFOSAA-d5
Conc 5.2382
RT 5.117 Area 1540757
Q 588.80>419.00 (-) 5.38e5



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.758 Area 1042019
ISTD 530.90>169.15 (-) 4.17e5



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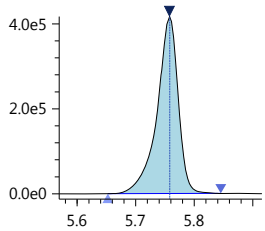
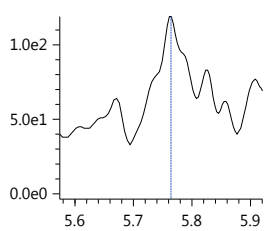
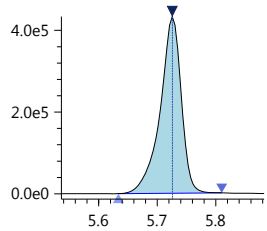
Conc 5.1255
RT 5.758 Area 1042019
Q 530.90>169.15 (-) 4.17e5



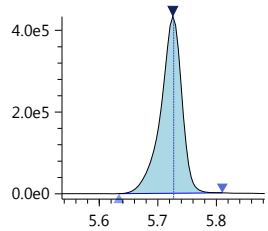
N-EtFOSA
Conc ----
RT ---- Area ----
Q 526.90>169.10 (-) 1.19e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.726 Area 1081669
ISTD 638.70>59.10 (-) 4.34e5



N-EtFOSE-d9
Conc 5.0472
RT 5.726 Area 1081669
Q 638.70>59.10 (-) 4.34e5

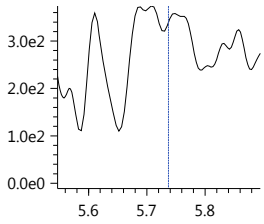


N-EtFOSE

Conc ----

RT ---- Area ----

Q 630.00>58.90 (-) 3.74e2

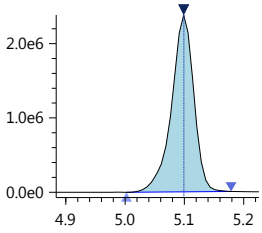


13C7-PFUnDA_IS

Conc 5.0000

RT 5.099 Area 6216152

ISTD 570.00>525.00 (-) 2.39e6

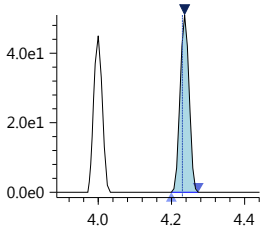


PFPeS

Conc 0.0009

RT 4.236 Area 87

Q 349.00>99.00 (-) 5.10e1

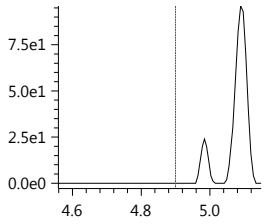


PFNS

Conc ----

RT ---- Area ----

Q 549.00>99.00 (-) 9.60e1



190301_017

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PFBA-13C_IS
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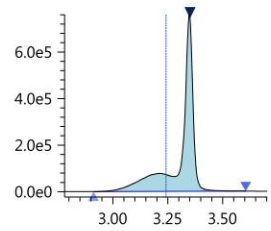
RT 3.351 Area 2758474
ISTD 216.90>172.15 (-) 7.61e5



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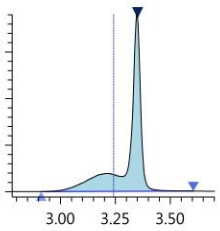
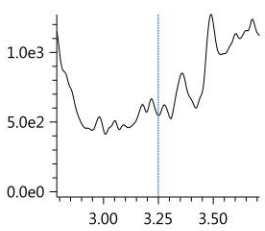
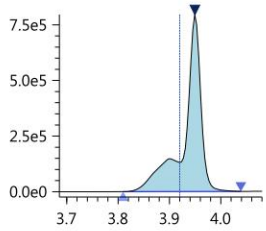
Conc 4.9832
RT 3.351 Area 2758474
Q 216.90>172.15 (-) 7.61e5



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.27e3



PFPeA-13C_IS
Conc 5.0000
RT 3.950 Area 1793826
ISTD 267.90>223.00 (-) 7.96e5



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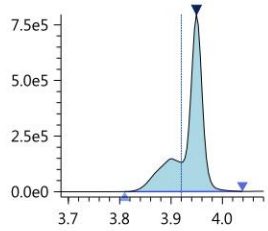
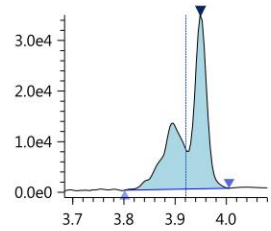
Conc 4.9990
RT 3.950 Area 1793826
Q 267.90>223.00 (-) 7.96e5



PFPeA
Conc 0.0739
RT 3.950 Area 97452
Q 263.05>219.10 (-) 3.50e4



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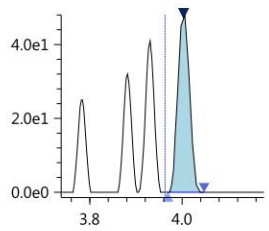
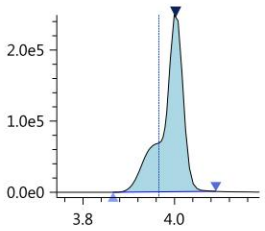
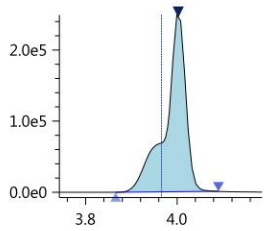
Conc 0.0006
RT 4.003 Area 85
Q 299.00>80.00 (-) 4.80e1



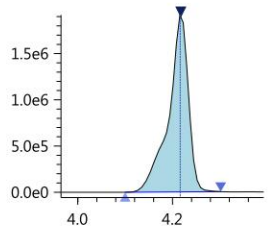
PFBS-13C
Conc 4.7244
RT 4.003 Area 766060
Q 301.80>80.00 (-) 2.49e5



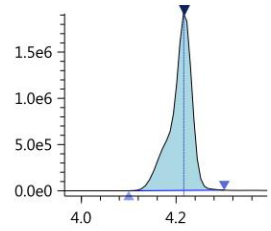
PFBS-13C_IS
Conc 5.0000
RT 4.003 Area 766060
ISTD 301.80>80.00 (-) 2.49e5



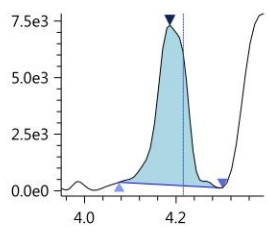
PFHxA-13C_IS
Conc 5.0000
RT 4.217 Area 5519476
ISTD 314.90>270.10 (-) 1.92e6



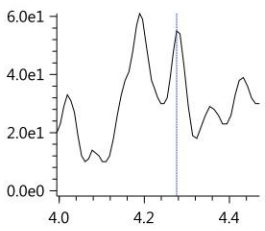
PFHxA-13C
Conc 4.9879
RT 4.217 Area 5519476
Q 314.90>270.10 (-) 1.92e6



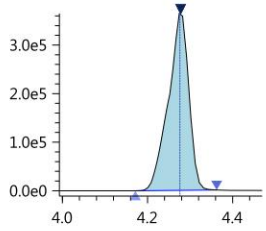
PFHxA
Conc 0.0277
RT 4.186 Area 31659
Q 313.00>269.00 (-) 7.83e3



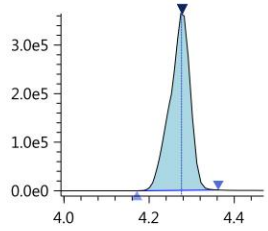
HPFO_DA
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-) 6.10e1



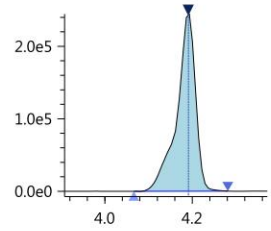
HFPO_DA-13C_IS
Conc 5.0000
RT 4.278 Area 1212709
ISTD 332.00>286.80 (-) 3.65e5



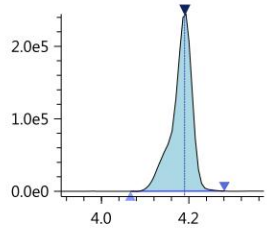
HFPO_DA-13C
Conc 5.0471
RT 4.278 Area 1212709
Q 332.00>286.80 (-) 3.65e5



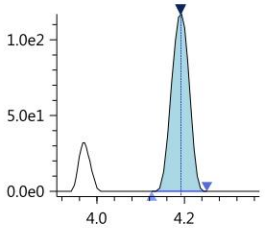
4_2-FTS-13C_IS
Conc 5.0000
RT 4.191 Area 722426
ISTD 328.80>309.05 (-) 2.45e5



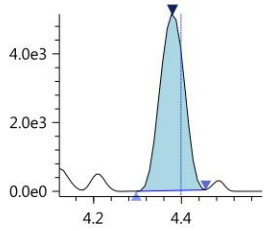
4_2-FTS-13C
Conc 5.0004
RT 4.191 Area 722426
Q 328.80>309.05 (-) 2.45e5



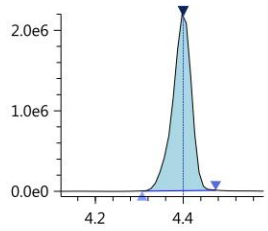
4_2-FTS_1
Conc 0.0020
RT 4.191 Area 334
Q 327.00>307.05 (-) 1.17e2



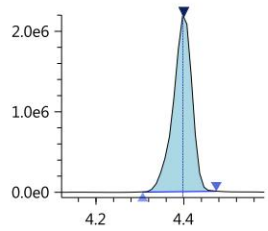
PFHpA
Conc 0.0163
RT 4.380 Area 20140
Q 362.90>319.00 (-) 5.16e3



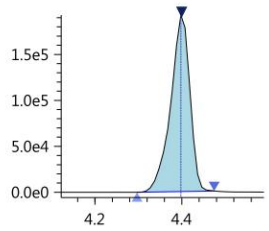
PFHpA-13C_IS
Conc 5.0000
RT 4.400 Area 6569994
ISTD 366.90>322.10 (-) 2.20e6



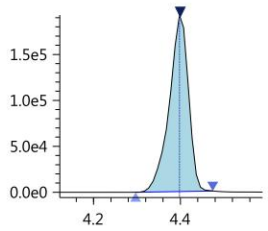
PFHpA-13C
Conc 5.7727
RT 4.400 Area 6569994
Q 366.90>322.10 (-) 2.20e6



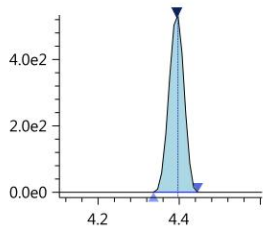
PFHxS-18O_IS
Conc 5.0000
RT 4.400 Area 590001
ISTD 402.70>84.05 (-) 1.93e5



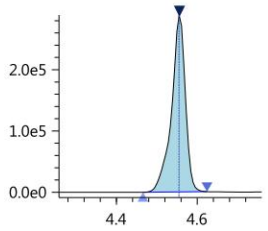
PFHxS-18O
Conc 5.2897
RT 4.400 Area 590001
Q 402.70>84.05 (-) 1.93e5



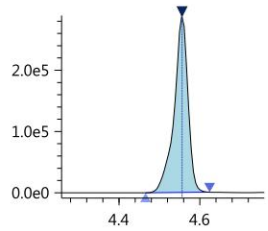
PFHxS_1
Conc 0.0116
RT 4.394 Area 1418
Q 399.00>80.00 (-) 5.34e2



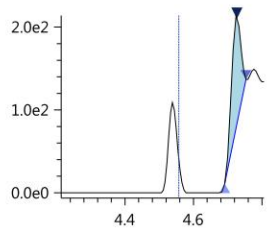
6_2-FTS-13C
Conc 5.3728
RT 4.556 Area 686698
Q 428.90>409.00 (-) 2.89e5



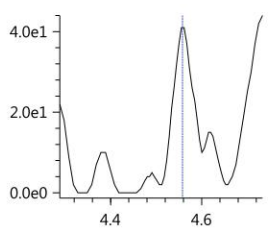
6_2-FTS-13C_IS
Conc 5.0000
RT 4.556 Area 686698
ISTD 428.90>409.00 (-) 2.89e5



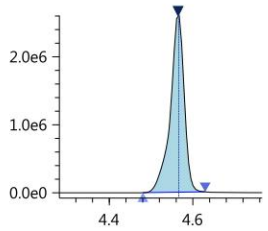
6_2-FTS_1
Conc 0.0017
RT 4.727 Area 245
Q 427.00>407.00 (-) 2.14e2



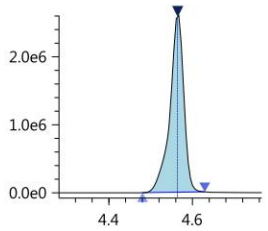
PFHpS_1
Conc ----
RT ---- Area ----
Q 449.00>80.15 (-) 4.40e1



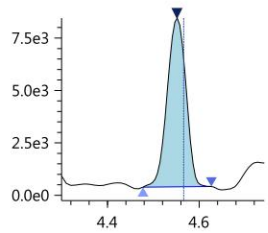
PFOA-13C_IS
Conc 5.0000
RT 4.565 Area 6036650
ISTD 416.80>372.05 (-) 2.61e6



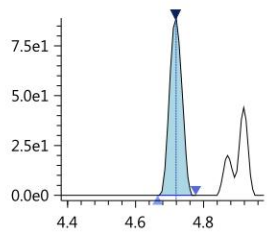
PFOA-13C
Conc 5.3214
RT 4.565 Area 6036650
Q 416.80>372.05 (-) 2.61e6



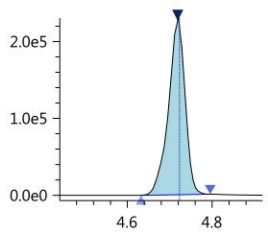
PFOA
Conc 0.0207
RT 4.551 Area 23004
Q 413.00>369.00 (-) 8.45e3



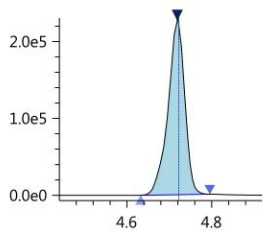
PFOS_1
Conc 0.0028
RT 4.718 Area 231
Q 499.00>80.00 (-) 8.90e1



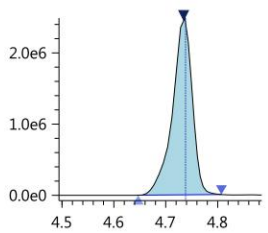
PFOS-13C_IS
Conc 5.0000
RT 4.719 Area 619366
ISTD 502.80>80.05 (-) 2.31e5



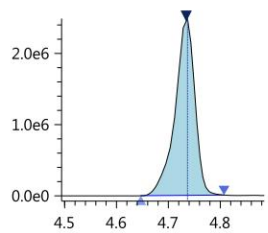
PFOS-13C
Conc 4.6804
RT 4.719 Area 619366
Q 502.80>80.05 (-) 2.31e5



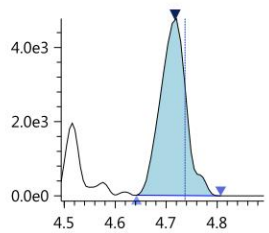
PFNA-13C_IS
Conc 5.0000
RT 4.734 Area 6566496
ISTD 467.80>423.00 (-) 2.49e6



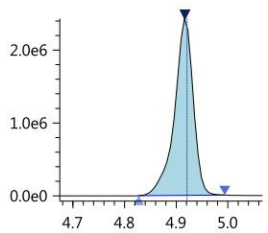
PFNA-13C
Conc 5.1610
RT 4.734 Area 6566496
Q 467.80>423.00 (-) 2.49e6



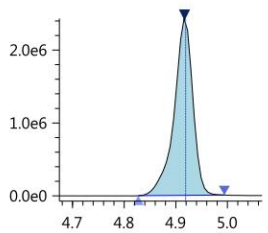
PFNA
Conc 0.0176
RT 4.717 Area 16860
Q 463.00>418.90 (-) 4.78e3



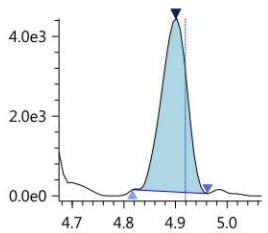
PFDA-13C_IS
Conc 5.0000
RT 4.917 Area 6124447
ISTD 514.80>469.95 (-) 2.43e6



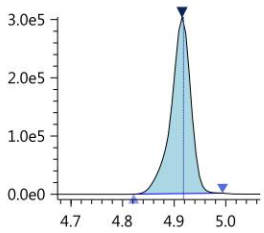
PFDA-13C
Conc 5.1026
RT 4.917 Area 6124447
Q 514.80>469.95 (-) 2.43e6



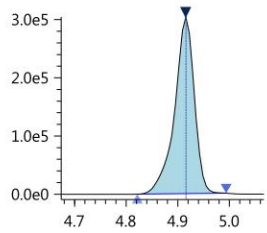
PFDA
Conc 0.0151
RT 4.900 Area 15131
Q 513.00>468.80 (-) 4.45e3



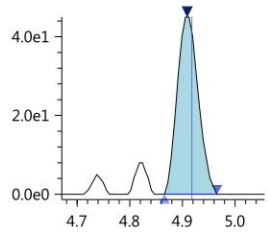
8_2-FTS-13C_IS
Conc 5.0000
RT 4.915 Area 806319
ISTD 528.80>509.00 (-) 3.04e5



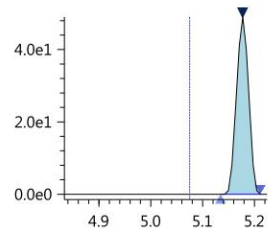
8_2-FTS-13C
Conc 5.4072
RT 4.915 Area 806319
Q 528.80>509.00 (-) 3.04e5



8_2-FTS_1
Conc 0.0008
RT 4.909 Area 126
Q 527.10>506.90 (-) 4.50e1



PFDS_1
Conc 0.0008
RT 5.177 Area 80
Q 599.00>79.90 (-) 4.90e1



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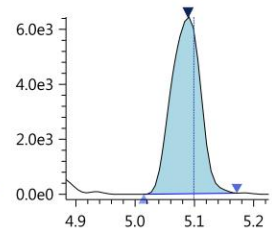
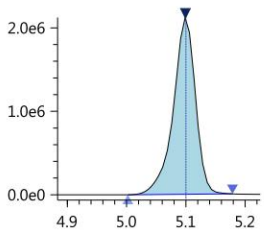
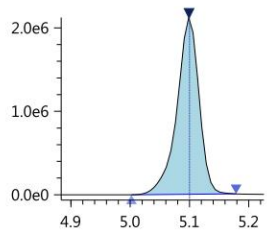
Conc 0.0219
RT 5.089 Area 22479
Q 563.00>518.90 (-) 6.45e3



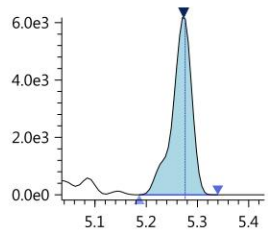
PFUnA-13C_IS
Conc 5.0000
RT 5.099 Area 5507779
ISTD 564.80>519.95 (-) 2.12e6



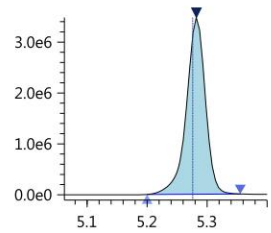
PFUnA-13C
Conc 5.1000
RT 5.099 Area 5507779
Q 564.80>519.95 (-) 2.12e6



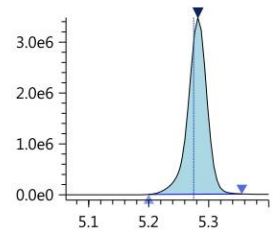
PFDoA
Conc 0.0172
RT 5.273 Area 16435
Q 613.05>569.00 (-) 6.18e3



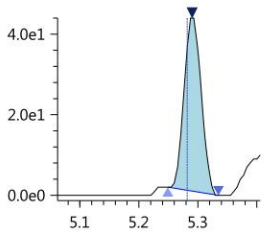
PFDoA-13C
Conc 4.8507
RT 5.282 Area 7630559
Q 614.80>569.95 (-) 3.48e6



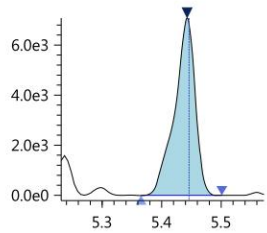
PFDoA-13C_IS
Conc 5.0000
RT 5.282 Area 7630559
ISTD 614.80>569.95 (-) 3.48e6



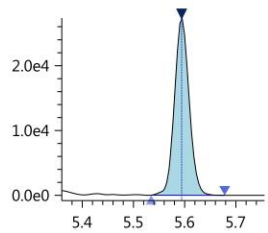
10_2-FtS_1
Conc 0.0005
RT 5.290 Area 87
Q 627.00>606.95 (-) 4.40e1



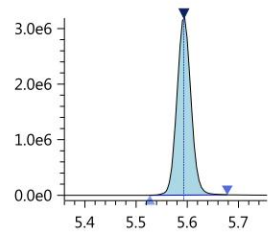
PFTrDA
Conc 0.0145
RT 5.443 Area 16998
Q 663.00>618.90 (-) 7.08e3



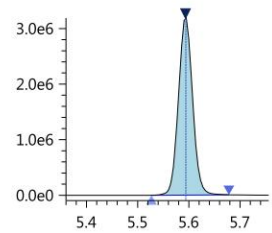
PFTeDA
Conc 0.0774
RT 5.594 Area 54647
Q 713.40>669.00 (-) 2.73e4



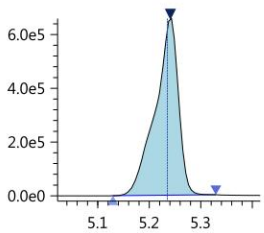
PFTeDA-13C
Conc 5.2715
RT 5.593 Area 6139916
Q 714.70>669.90 (-) 3.19e6



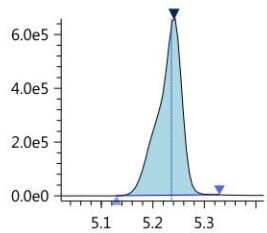
PFTeDA-13C_IS
Conc 5.0000
RT 5.593 Area 6139916
ISTD 714.70>669.90 (-) 3.19e6



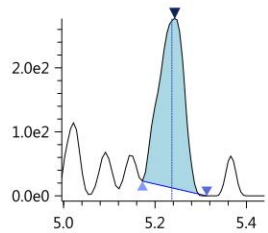
FOSA-13C_IS
Conc 5.0000
RT 5.241 Area 2045532
ISTD 506.00>78.05 (-) 6.59e5



FOSA-13C
Conc 5.0628
RT 5.241 Area 2045532
Q 506.00>78.05 (-) 6.59e5



FOSA
Conc 0.0019
RT 5.243 Area 1037
Q 498.20>78.00 (-) 2.77e2



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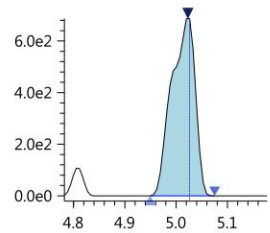
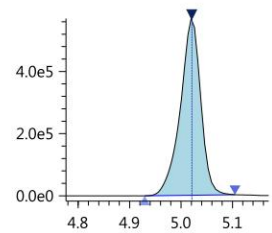
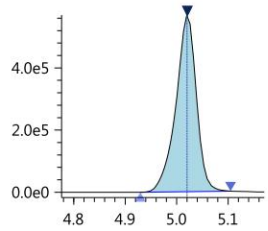
Conc 0.0115
RT 5.023 Area 2215
Q 570.20>419.00 (-) 6.87e2



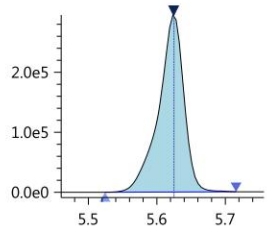
N-MeFOSAA-d3
Conc 5.3348
RT 5.021 Area 1572909
Q 572.80>419.05 (-) 5.70e5



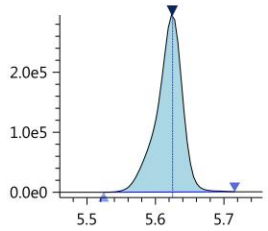
N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.021 Area 1572909
ISTD 572.80>419.05 (-) 5.70e5



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.624 Area 754894
ISTD 514.90>168.90 (-) 2.95e5



N-MeFOSA-d3
Conc 5.1414
RT 5.624 Area 754894
Q 514.90>168.90 (-) 2.95e5



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Conc 0.0059
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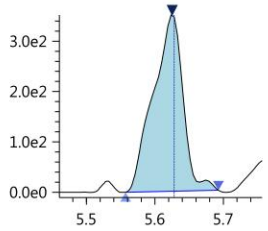
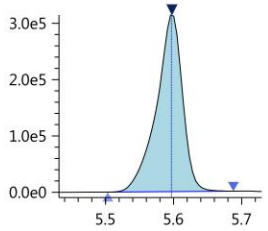
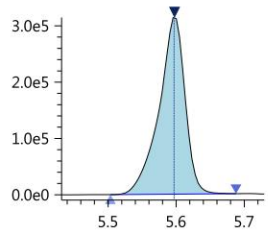
Q 512.00>169.10 (-) 3.52e2



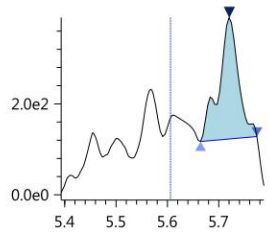
N-MeFOSE-d7
Conc 5.3719
RT 5.598 Area 834080
Q 622.70>59.10 (-) 3.15e5



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.598 Area 834080
ISTD 622.70>59.10 (-) 3.15e5



N-MeFOSE
Conc 0.0033
RT 5.720 Area 709
Q 616.00>59.00 (-) 3.90e2



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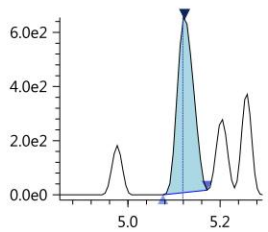
Conc 0.0088
RT 5.123 Area 1609
Q 584.20>418.95 (-) 6.55e2



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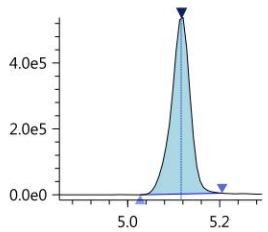
RT 5.117 Area 1540757
ISTD 588.80>419.00 (-) 5.38e5



N-EtFOSAA-d5
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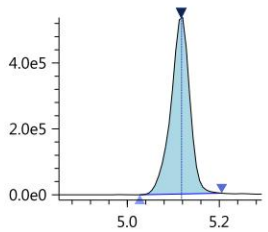
Q 588.80>419.00 (-) 5.38e5



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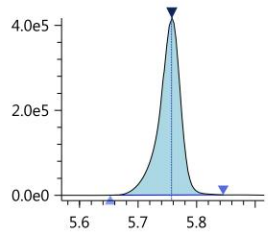
Conc 5.0000
RT 5.758 Area 1042019
ISTD 530.90>169.15 (-) 4.17e5



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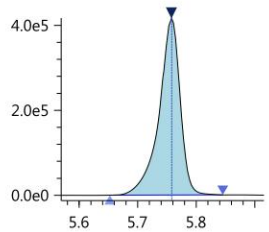
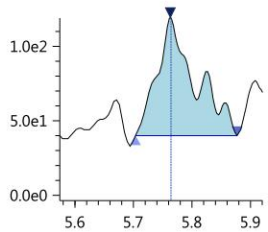
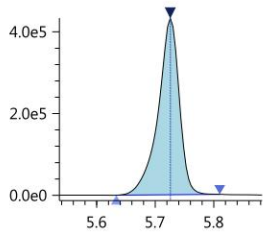
RT 5.758 Area 1042019
Q 530.90>169.15 (-) 4.17e5



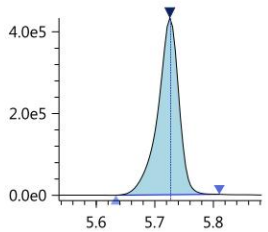
N-EtFOSA
Conc 0.0105
RT 5.763 Area 360
Q 526.90>169.10 (-) 1.19e2



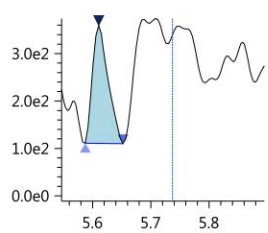
N-EtFOSE-d9_IS
Conc 5.0000
RT 5.726 Area 1081669
ISTD 638.70>59.10 (-) 4.34e5



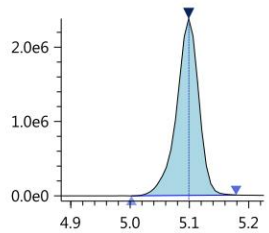
N-EtFOSE-d9
Conc 5.0472
RT 5.726 Area 1081669
Q 638.70>59.10 (-) 4.34e5



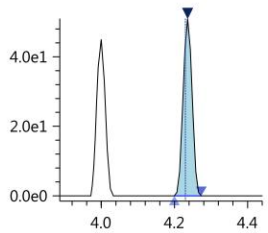
N-EtFOSE
Conc 0.0023
RT 5.611 Area 462
Q 630.00>58.90 (-) 3.74e2



13C7-PFUnDA_IS
Conc 5.0000
RT 5.099 Area 6216152
ISTD 570.00>525.00 (-) 2.39e6



PFPeS
Conc 0.0009
RT 4.236 Area 87
Q 349.00>99.00 (-) 5.10e1



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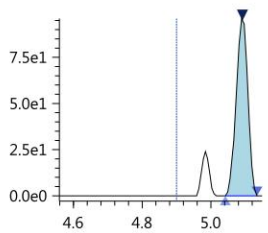
Conc 0.0027
RT 5.092 Area 228
Q 549.00>99.00 (-) 9.60e1



190301_018

Sample ID: T-PFOA
Date acquired: 3/1/2019 6:22:11 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_018.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
PFBA-13C_IS	ND(W/B)	----	----	----	2	----	ng/mL	----
PFBA-13C	ND(W/B)	----	----	1792	26	----	ng/mL	----
PFBA	ND(W/B)	----	----	----	2	----	ng/mL	----
PFPeA-13C_IS	Auto	4.024	144	144	4	5.0000	ng/mL	----
PFPeA-13C	Auto	4.024	144	1792	26	1.3960	ng/mL	----
PFPeA	Auto	3.890	24093	144	4	363.9263	ng/mL	----
PFBS_1	ND(W/B)	----	----	----	16	----	ng/mL	----
PFBS-13C	ND(W/B)	----	----	1792	26	----	ng/mL	----
PFBS-13C_IS	ND(W/B)	----	----	----	16	----	ng/mL	----
PFHxA-13C_IS	Auto	4.082	2587	2587	6	5.0000	ng/mL	----
PFHxA-13C	Auto	4.082	2587	1792	26	8.1090	ng/mL	----
PFHxA	Auto	4.184	30399	2587	6	65.8451	ng/mL	----
HPFO_DA	Auto	4.258	5290	151	3	163.6926	ng/mL	----
HFPO_DA-13C_IS	Auto	4.129	151	151	3	5.0000	ng/mL	----
HFPO_DA-13C	Auto	4.129	151	1792	26	2.1741	ng/mL	----
4_2-FTS-13C_IS	ND(W/B)	----	----	----	5	----	ng/mL	----
4_2-FTS-13C	ND(W/B)	----	----	1792	26	----	ng/mL	----
4_2-FTS_1	Auto	4.094	98	----	5	0.0000	ng/mL	----
PFHpA	Auto	4.381	29516	767	8	244.8747	ng/mL	----
PFHpA-13C_IS	Auto	4.382	767	767	8	5.0000	ng/mL	----
PFHpA-13C	Auto	4.382	767	1792	26	2.3371	ng/mL	----
PFHxS-18O_IS	ND(W/B)	----	----	----	7	----	ng/mL	----
PFHxS-18O	ND(W/B)	----	----	1792	26	----	ng/mL	----
PFHxS_1	ND(W/B)	----	----	----	7	----	ng/mL	----
6_2-FTS-13C	Auto	4.724	44	1792	26	1.1917	ng/mL	----
6_2-FTS-13C_IS	Auto	4.724	44	44	10	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.752	683	----	15	0.0000	ng/mL	----
PFHpS_1	Auto	4.335	82	----	7	0.0000	ng/mL	----
PFOA-13C_IS	Auto	4.483	764	764	9	5.0000	ng/mL	----
PFOA-13C	Auto	4.483	764	1792	26	2.3356	ng/mL	----
PFOA	Auto	4.557	1001081	764	9	7952.7394	ng/mL	----
PFOS_1	ND(W/B)	----	----	203	13	----	ng/mL	----
PFOS-13C_IS	Auto	4.719	203	203	13	5.0000	ng/mL	----
PFOS-13C	Auto	4.719	203	1792	26	5.3100	ng/mL	----
PFNA-13C_IS	Auto	4.730	900	900	11	5.0000	ng/mL	----
PFNA-13C	Auto	4.730	900	1792	26	2.4548	ng/mL	----
PFNA	Auto	4.706	10155	900	11	82.7532	ng/mL	----
PFDA-13C_IS	Auto	4.910	896	896	12	5.0000	ng/mL	----
PFDA-13C	Auto	4.910	896	1792	26	2.5897	ng/mL	----
PFDA	Auto	4.886	17006	896	12	116.2960	ng/mL	----
8_2-FTS-13C_IS	ND(W/B)	----	----	----	15	----	ng/mL	----
8_2-FTS-13C	ND(W/B)	----	----	1792	26	----	ng/mL	----
8_2-FTS_1	ND(W/B)	----	----	----	15	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	203	13	----	ng/mL	----
PFUnA	Auto	5.067	14812	1400	14	68.5578	ng/mL	----
PFUnA-13C_IS	Auto	5.098	1400	1400	14	5.0000	ng/mL	----
PFUnA-13C	Auto	5.098	1400	1792	26	4.4952	ng/mL	----
PFDoA	Auto	5.255	8902	2192	17	33.9528	ng/mL	----
PFDoA-13C	Auto	5.272	2192	1792	26	4.8326	ng/mL	----
PFDoA-13C_IS	Auto	5.272	2192	2192	17	5.0000	ng/mL	----
10_2-FtS_1	Auto	5.278	384	----	15	0.0000	ng/mL	----
PFTrDA	Auto	5.414	13868	3120	22	24.9088	ng/mL	----
PFTeDA	Auto	5.567	5601	3120	22	25.8545	ng/mL	----
PFTeDA-13C	Auto	5.586	3120	1792	26	9.2915	ng/mL	----
PFTeDA-13C_IS	Auto	5.586	3120	3120	22	5.0000	ng/mL	----
FOSA-13C_IS	Auto	5.240	572	572	18	5.0000	ng/mL	----
FOSA-13C	Auto	5.240	572	1792	26	4.9145	ng/mL	----
FOSA	Auto	5.363	339	572	18	2.2495	ng/mL	----
N-MeFOSAA	Auto	5.021	2120	8476	19	2.0280	ng/mL	----
N-MeFOSAA-d3	Auto	5.020	8476	1792	26	99.7200	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.020	8476	8476	19	5.0000	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.622	988	988	1	5.0000	ng/mL	----
N-MeFOSA-d3	Auto	5.622	988	1792	26	23.3289	ng/mL	----
N-MeFOSA	Auto	5.624	2212	988	1	9.4528	ng/mL	----
N-MeFOSE-d7	Auto	5.597	432	1792	26	9.6581	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.597	432	432	20	5.0000	ng/mL	----
N-MeFOSE	Auto	5.604	2377	432	20	21.2865	ng/mL	----

(Table continued from previous page)

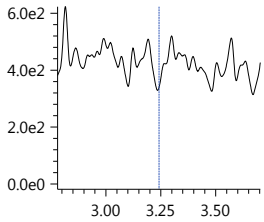
Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA	Auto	5.119	3122	9998	21	2.6713	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.114	9998	9998	21	5.0000	ng/mL	----
N-EtFOSAA-d5	Auto	5.114	9998	1792	26	117.8950	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.755	431	431	23	5.0000	ng/mL	----
N-EtFOSA-d9	Auto	5.755	431	1792	26	7.3507	ng/mL	----
N-EtFOSA	Auto	5.763	434	431	23	30.2228	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.756	705	705	24	5.0000	ng/mL	----
N-EtFOSE-d9	Auto	5.756	705	1792	26	11.4142	ng/mL	----
N-EtFOSE	Auto	5.730	1675	705	24	12.6731	ng/mL	----
13C7-PFUnDA_IS	Auto	5.095	1792	1792	26	5.0000	ng/mL	----
PFPeS	Auto	4.341	181	----	16	0.0000	ng/mL	----
PFNS	Auto	4.810	266	203	13	9.3686	ng/mL	----

PFBA-13C_IS

Conc ----

RT ---- Area ----

ISTD 216.90>172.15 (-) 6.23e2

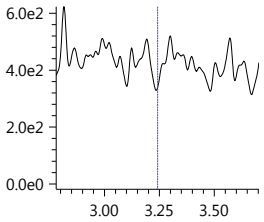


PFBA-13C

Conc ----

RT ---- Area ----

Q 216.90>172.15 (-) 6.23e2

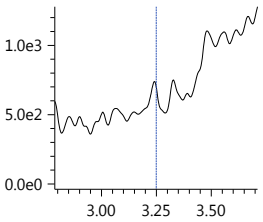


PFBA

Conc ----

RT ---- Area ----

Q 213.00>169.10 (-) 1.28e3

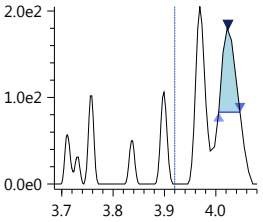


PFPeA-13C_IS

Conc 5.0000

RT 4.024 Area 144

ISTD 267.90>223.00 (-) 2.05e2

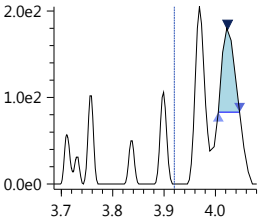


PFPeA-13C

Conc 1.3960

RT 4.024 Area 144

Q 267.90>223.00 (-) 2.05e2

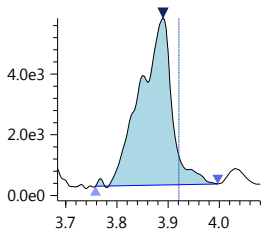


PFPeA

Conc 363.9263

RT 3.890 Area 24093

Q 263.05>219.10 (-) 5.84e3

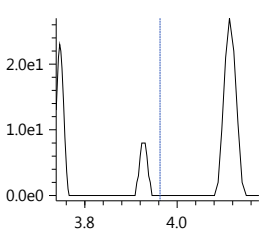


PFBS_1

Conc ----

RT ---- Area ----

Q 299.00>80.00 (-) 2.70e1

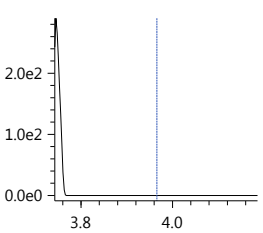


PFBS-13C

Conc ----

RT ---- Area ----

Q 301.80>80.00 (-) 2.90e2

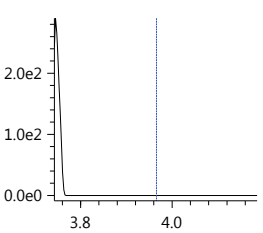


PFBS-13C_IS

Conc ----

RT ---- Area ----

ISTD 301.80>80.00 (-) 2.90e2

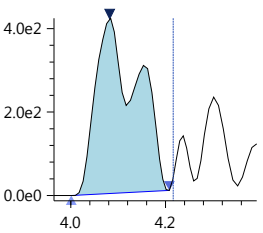


PFHxA-13C_IS

Conc 5.0000

RT 4.082 Area 2587

ISTD 314.90>270.10 (-) 4.25e2

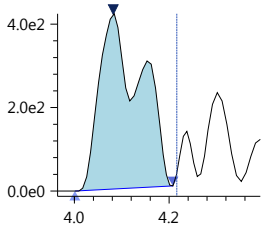


PFHxA-13C

Conc 8.1090

RT 4.082 Area 2587

Q 314.90>270.10 (-) 4.25e2

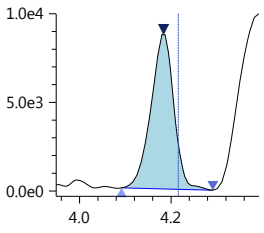


PFHxA

Conc 65.8451

RT 4.184 Area 30399

Q 313.00>269.00 (-) 1.00e4

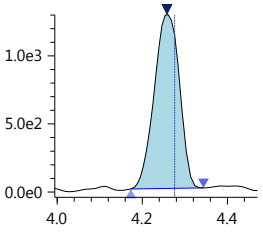


HPFO_DA

Conc 163.6926

RT 4.258 Area 5290

Q 329.00>169.00 (-) 1.30e3

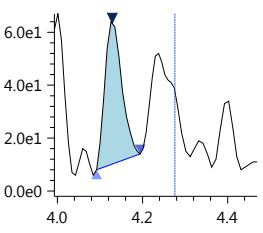


HFPO_DA-13C_IS

Conc 5.0000

RT 4.129 Area 151

ISTD 332.00>286.80 (-) 6.70e1

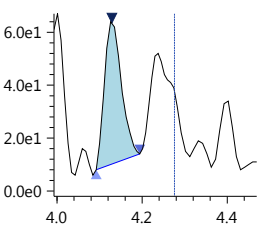


HFPO_DA-13C

Conc 2.1741

RT 4.129 Area 151

Q 332.00>286.80 (-) 6.70e1

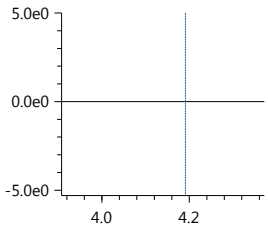


4_2-FTS-13C_IS

Conc ----

RT ---- Area ----

ISTD 328.80>309.05 (-) 0.00e0

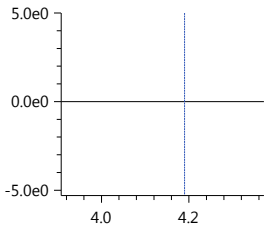


4_2-FTS-13C

Conc ----

RT ---- Area ----

Q 328.80>309.05 (-) 0.00e0

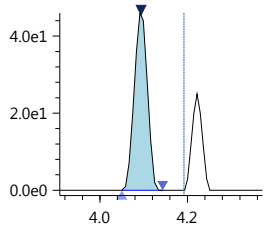


4_2-FTS_1

Conc 0.0000

RT 4.094 Area 98

Q 327.00>307.05 (-) 4.60e1

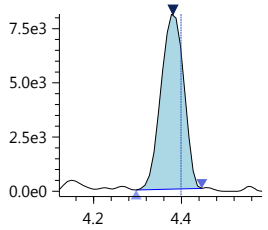


PFHpA

Conc 244.8747

RT 4.381 Area 29516

Q 362.90>319.00 (-) 8.18e3

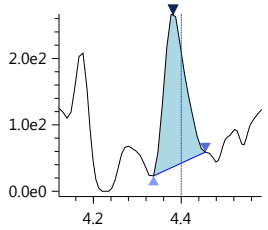


PFHpA-13C_IS

Conc 5.0000

RT 4.382 Area 767

ISTD 366.90>322.10 (-) 2.67e2

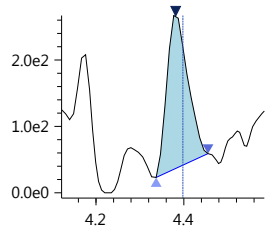


PFHpA-13C

Conc 2.3371

RT 4.382 Area 767

Q 366.90>322.10 (-) 2.67e2

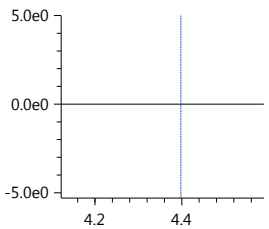


PFHxS-18O_IS

Conc ----

RT ---- Area ----

ISTD 402.70>84.05 (-) 0.00e0

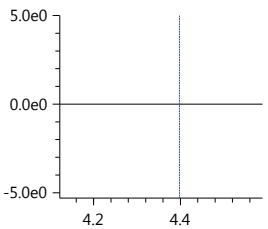


PFHxS-18O

Conc ----

RT ---- Area ----

Q 402.70>84.05 (-) 0.00e0

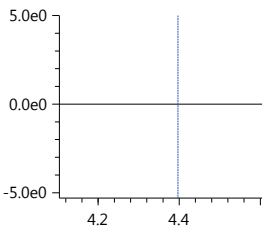


PFHxS_1

Conc ----

RT ---- Area ----

Q 399.00>80.00 (-) 0.00e0

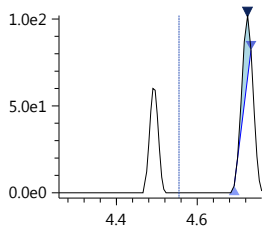


6_2-FTS-13C

Conc 1.1917

RT 4.724 Area 44

Q 428.90>409.00 (-) 1.02e2

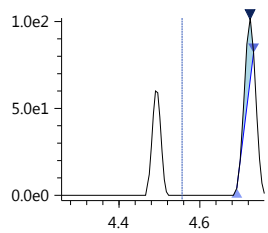


6_2-FTS-13C_IS

Conc 5.0000

RT 4.724 Area 44

ISTD 428.90>409.00 (-) 1.02e2

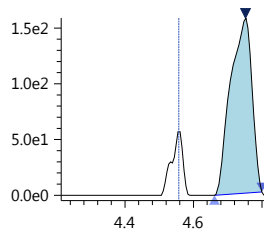


6_2-FTS_1

Conc 0.0000

RT 4.752 Area 683

Q 427.00>407.00 (-) 1.59e2

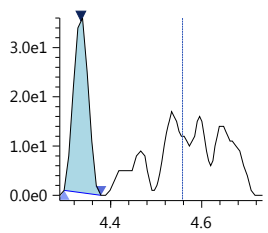


PFHpS_1

Conc 0.0000

RT 4.335 Area 82

Q 449.00>80.15 (-) 3.60e1

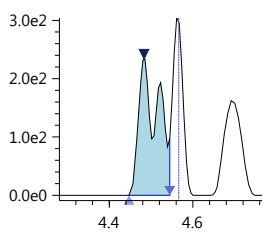


PFOA-13C_IS

Conc 5.0000

RT 4.483 Area 764

ISTD 416.80>372.05 (-) 3.04e2

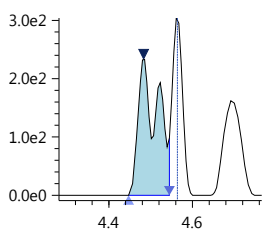


PFOA-13C

Conc 2.3356

RT 4.483 Area 764

Q 416.80>372.05 (-) 3.04e2

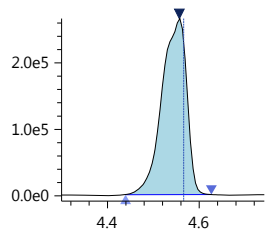


PFOA

Conc 7952.7394

RT 4.557 Area 1001081

Q 413.00>369.00 (-) 2.67e5

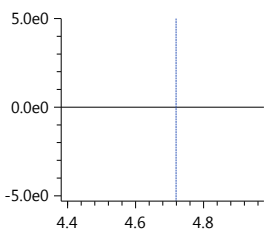


PFOS_1

Conc ----

RT ---- Area ----

Q 499.00>80.00 (-) 0.00e0

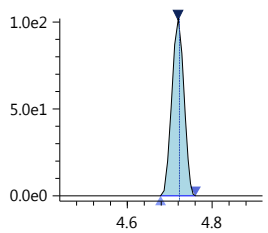


PFOS-13C_IS

Conc 5.0000

RT 4.719 Area 203

ISTD 502.80>80.05 (-) 1.02e2

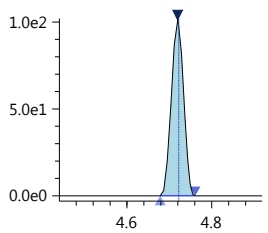


PFOS-13C

Conc 5.3100

RT 4.719 Area 203

Q 502.80>80.05 (-) 1.02e2

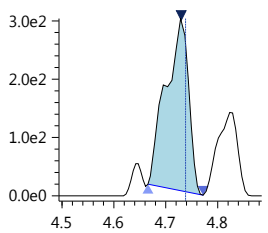


PFNA-13C_IS

Conc 5.0000

RT 4.730 Area 900

ISTD 467.80>423.00 (-) 3.04e2

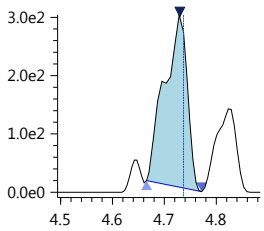


PFNA-13C

Conc 2.4548

RT 4.730 Area 900

Q 467.80>423.00 (-) 3.04e2

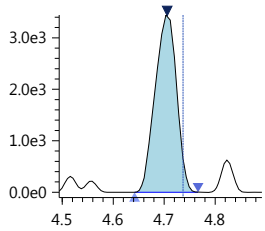


PFNA

Conc 82.7532

RT 4.706 Area 10155

Q 463.00>418.90 (-) 3.44e3

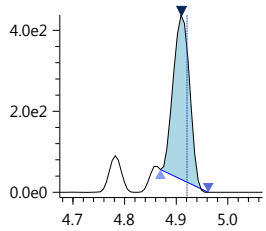


PFDA-13C_IS

Conc 5.0000

RT 4.910 Area 896

ISTD 514.80>469.95 (-) 4.38e2

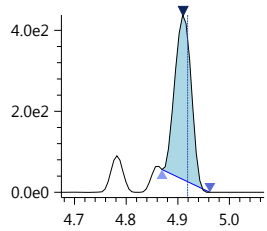


PFDA-13C

Conc 2.5897

RT 4.910 Area 896

Q 514.80>469.95 (-) 4.38e2

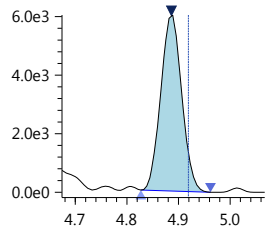


PFDA

Conc 116.2960

RT 4.886 Area 17006

Q 513.00>468.80 (-) 6.06e3

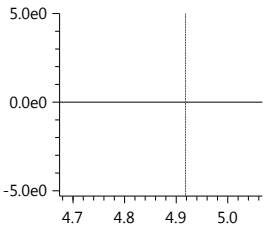


8_2-FTS-13C_IS

Conc ----

RT ---- Area ----

ISTD 528.80>509.00 (-) 0.00e0

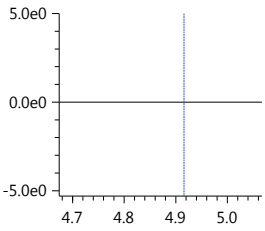


8_2-FTS-13C

Conc ----

RT ---- Area ----

Q 528.80>509.00 (-) 0.00e0

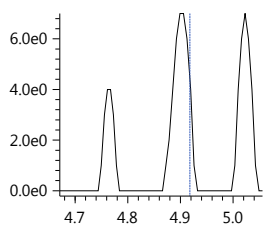


8_2-FTS_1

Conc ----

RT ---- Area ----

Q 527.10>506.90 (-) 7.00e0

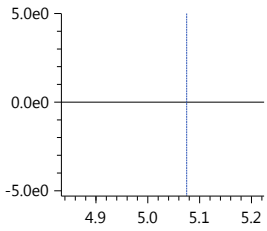


PFDS_1

Conc ----

RT ---- Area ----

Q 599.00>79.90 (-) 0.00e0

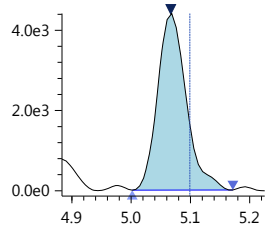


PFUnA

Conc 68.5578

RT 5.067 Area 14812

Q 563.00>518.90 (-) 4.42e3

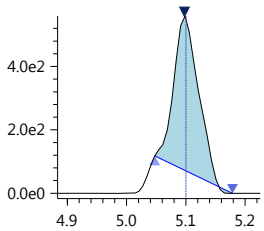


PFUnA-13C_IS

Conc 5.0000

RT 5.098 Area 1400

ISTD 564.80>519.95 (-) 5.59e2

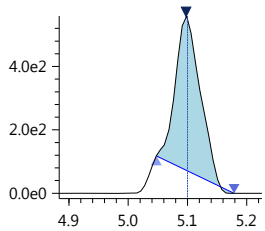


PFUnA-13C

Conc 4.4952

RT 5.098 Area 1400

Q 564.80>519.95 (-) 5.59e2

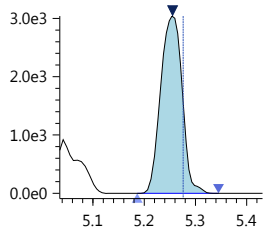


PFDoA

Conc 33.9528

RT 5.255 Area 8902

Q 613.05>569.00 (-) 3.04e3

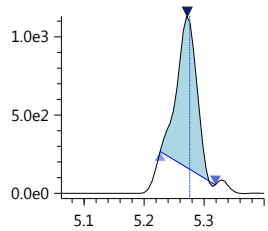


PFDoA-13C

Conc 4.8326

RT 5.272 Area 2192

Q 614.80>569.95 (-) 1.13e3

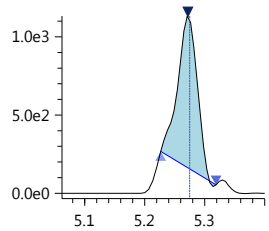


PFDoA-13C_IS

Conc 5.0000

RT 5.272 Area 2192

ISTD 614.80>569.95 (-) 1.13e3

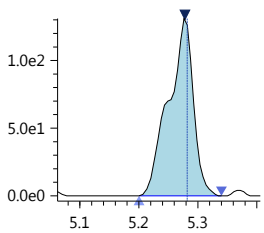


10_2-FtS_1

Conc 0.0000

RT 5.278 Area 384

Q 627.00>606.95 (-) 1.31e2

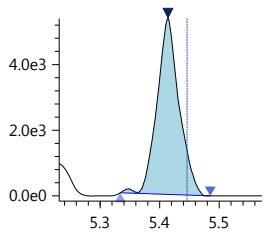


PFTrDA

Conc 24.9088

RT 5.414 Area 13868

Q 663.00>618.90 (-) 5.40e3

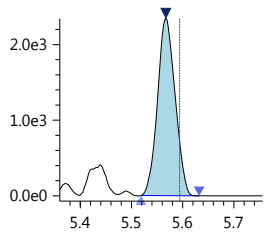


PFTeDA

Conc 25.8545

RT 5.567 Area 5601

Q 713.40>669.00 (-) 2.34e3

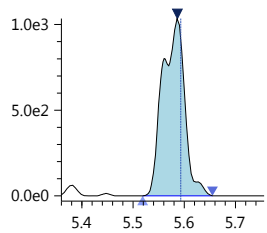


PFTeDA-13C

Conc 9.2915

RT 5.586 Area 3120

Q 714.70>669.90 (-) 1.04e3

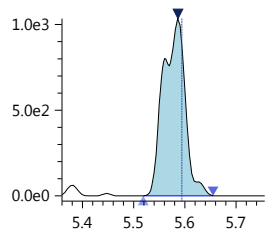


PFTeDA-13C_IS

Conc 5.0000

RT 5.586 Area 3120

ISTD 714.70>669.90 (-) 1.04e3



FOSA-13C_IS
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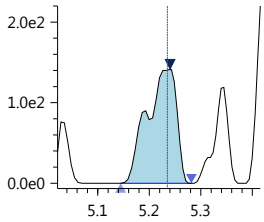
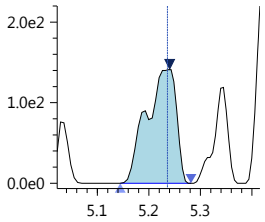
RT 5.240 Area 572
ISTD 506.00>78.05 (-) 2.20e2



FOSA-13C
Conc 4.9145
RT 5.240 Area 572
Q 506.00>78.05 (-) 2.20e2



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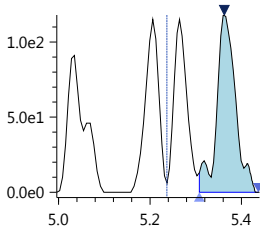
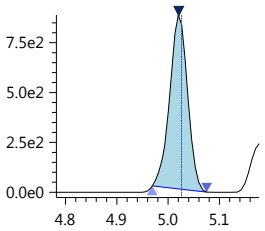
Conc 2.2495
RT 5.363 Area 339
Q 498.20>78.00 (-) 1.18e2



N-MeFOSAA
Conc 2.0280
RT 5.021 Area 2120
Q 570.20>419.00 (-) 8.89e2



N-MeFOSAA-d3
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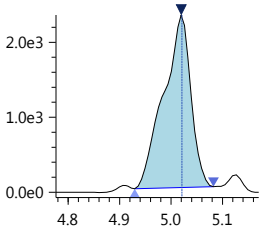
RT 5.020 Area 8476
Q 572.80>419.05 (-) 2.36e3



N-MeFOSAA-d3_IS
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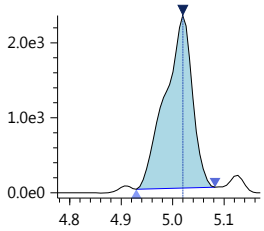
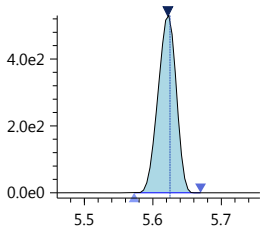
RT 5.020 Area 8476
ISTD 572.80>419.05 (-) 2.36e3



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 988
ISTD 514.90>168.90 (-) 5.30e2



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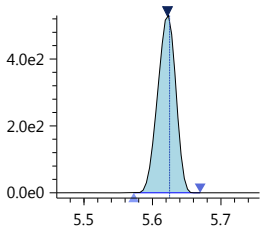
Conc 23.3289
RT 5.622 Area 988
Q 514.90>168.90 (-) 5.30e2



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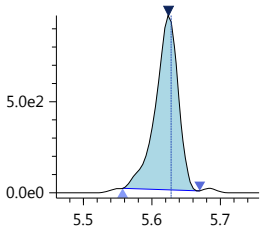

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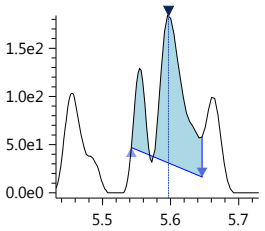
Conc 9.6581
RT 5.597 Area 432
Q 622.70>59.10 (-) 1.84e2



N-MeFOSE-d7_IS
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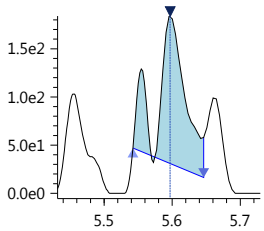
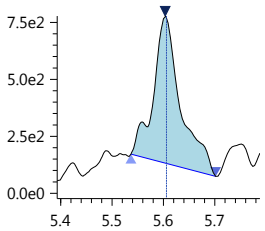


N-MeFOSE
Conc 21.2865
RT 5.604 Area 2377
Q 616.00>59.00 (-) 7.78e2



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Conc 2.6713
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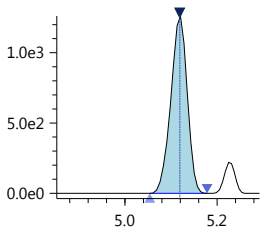
Q 584.20>418.95 (-) 1.26e3



N-EtFOSAA-d5_IS
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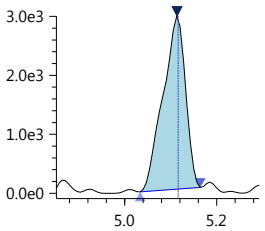
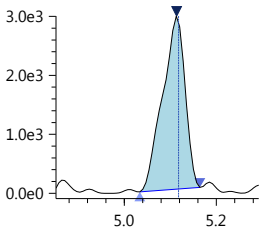
ISTD 588.80>419.00 (-) 3.01e3



N-EtFOSAA-d5
Conc 117.8950
RT 5.114 Area 9998
Q 588.80>419.00 (-) 3.01e3



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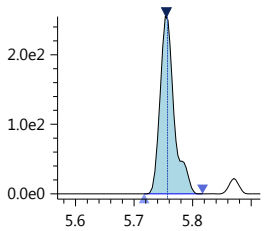
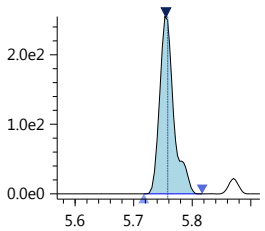
Conc 5.0000
RT 5.755 Area 431
ISTD 530.90>169.15 (-) 2.55e2



N-EtFOSA-d9
Conc 7.3507
RT 5.755 Area 431
Q 530.90>169.15 (-) 2.55e2



N-EtFOSA
Conc 30.2228
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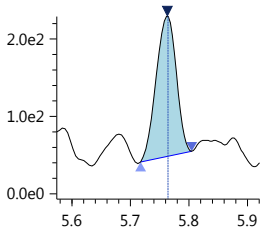
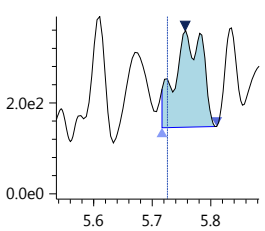
Q 526.90>169.10 (-) 2.29e2



N-EtFOSE-d9_IS
Conc 5.0000
RT 5.756 Area 705
ISTD 638.70>59.10 (-) 3.90e2



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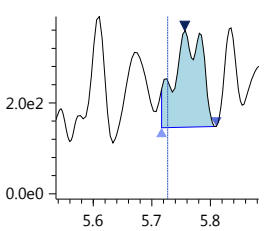
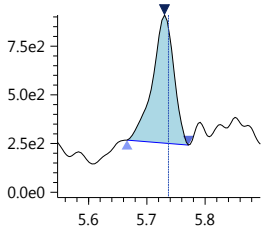
RT 5.756 Area 705
Q 638.70>59.10 (-) 3.90e2



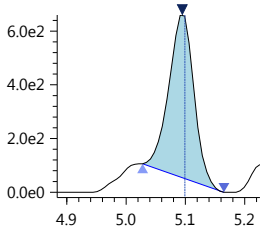
N-EtFOSE

Conc 12.6731
RT 5.730 Area 1675
Q 630.00>58.90 (-) 9.10e2



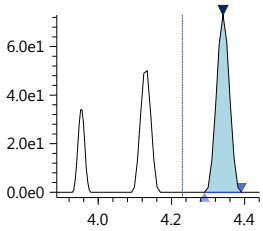
13C7-PFUnDA_IS

Conc 5.0000
RT 5.095 Area 1792
ISTD 570.00>525.00 (-) 6.60e2



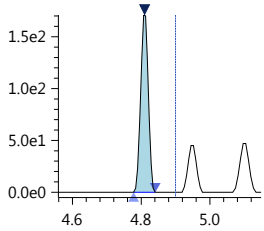
PFPeS

Conc 0.0000
RT 4.341 Area 181
Q 349.00>99.00 (-) 7.30e1



PFNS

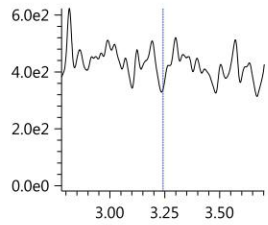
Conc 9.3686
RT 4.810 Area 266
Q 549.00>99.00 (-) 1.71e2



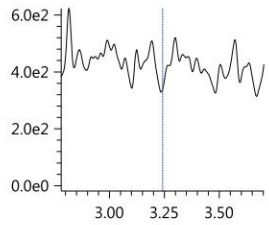
190301_018

Sample ID: T-PFOA
Date acquired: 3/1/2019 6:22:11 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\190301_b1\190301_018.lcd
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

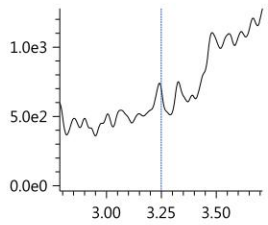
PFBA-13C_IS
Conc ----
RT ---- Area ----
ISTD 216.90>172.15 (-) 6.23e2



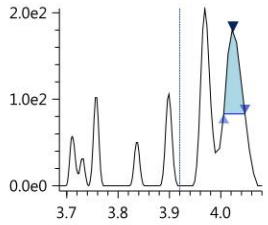
PFBA-13C
Conc ----
RT ---- Area ----
Q 216.90>172.15 (-) 6.23e2



PFBA
Conc ----
RT ---- Area ----
Q 213.00>169.10 (-) 1.28e3



PFPeA-13C_IS
Conc 5.0000
RT 4.024 Area 144
ISTD 267.90>223.00 (-) 2.05e2



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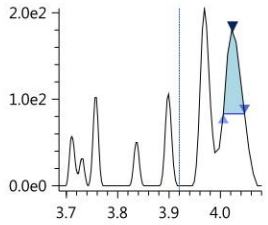
Conc 1.3960
RT 4.024 Area 144
Q 267.90>223.00 (-) 2.05e2



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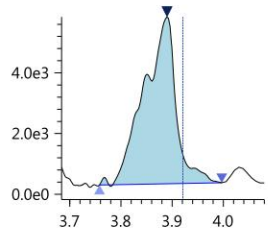
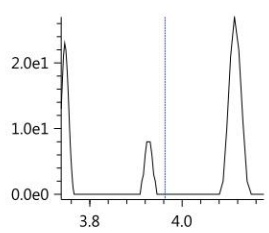
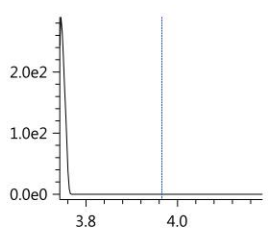
Conc 226.9482
RT 3.890 Area 24093
Q 263.05>219.10 (-) 5.84e3



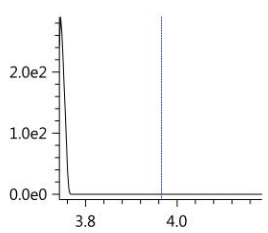
PFBS_1
Conc ----
RT ---- Area ----
Q 299.00>80.00 (-) 2.70e1



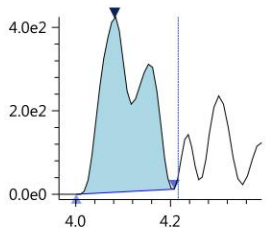
PFBS-13C
Conc ----
RT ---- Area ----
Q 301.80>80.00 (-) 2.90e2



PFBS-13C_IS
Conc ----
RT ---- Area ----
ISTD 301.80>80.00 (-) 2.90e2



PFHxA-13C_IS
Conc 5.0000
RT 4.082 Area 2587
ISTD 314.90>270.10 (-) 4.25e2



PFHxA-13C
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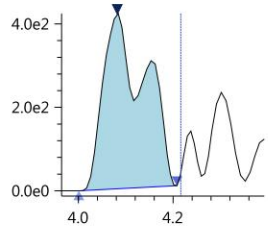
RT 4.082 Area 2587
Q 314.90>270.10 (-) 4.25e2



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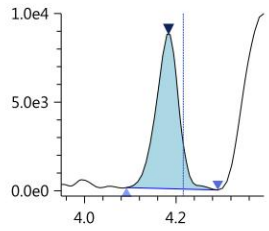
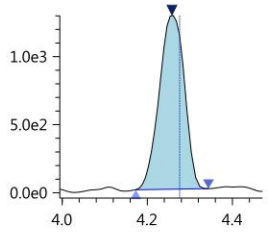
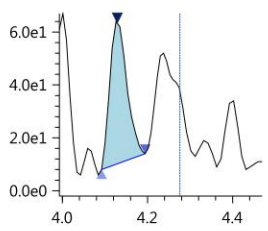
Conc 56.7312
RT 4.184 Area 30399
Q 313.00>269.00 (-) 1.00e4



HPFO_DA
Conc 163.6926
RT 4.258 Area 5290
Q 329.00>169.00 (-) 1.30e3



HFPO_DA-13C_IS
Conc 5.0000
RT 4.129 Area 151
ISTD 332.00>286.80 (-) 6.70e1



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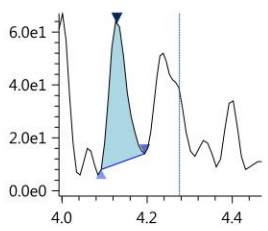
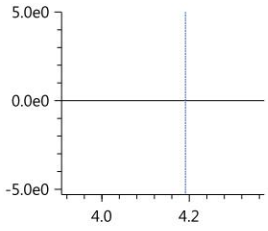
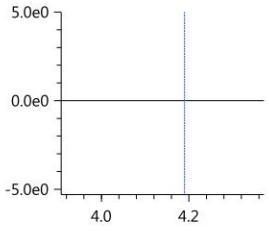
RT 4.129 Area 151
Q 332.00>286.80 (-) 6.70e1



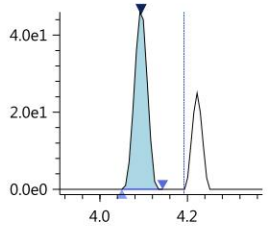
4_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 328.80>309.05 (-) 0.00e0



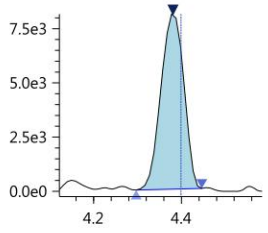
4_2-FTS-13C
Conc ----
RT ---- Area ----
Q 328.80>309.05 (-) 0.00e0



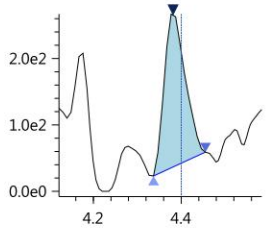
4_2-FTS_1
Conc 0.0000
RT 4.094 Area 98
Q 327.00>307.05 (-) 4.60e1



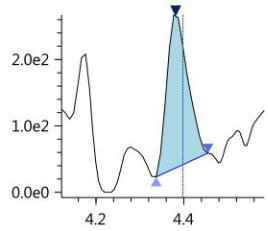
PFHpA
Conc 204.4088
RT 4.381 Area 29516
Q 362.90>319.00 (-) 8.18e3



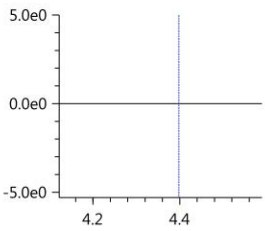
PFHpA-13C_IS
Conc 5.0000
RT 4.382 Area 767
ISTD 366.90>322.10 (-) 2.67e2



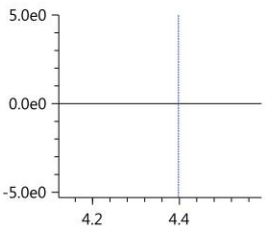
PFHpA-13C
Conc 2.3371
RT 4.382 Area 767
Q 366.90>322.10 (-) 2.67e2



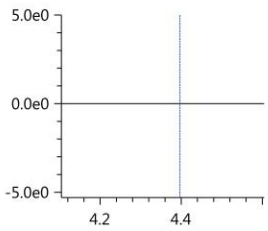
PFHxS-18O_IS
Conc ----
RT ---- Area ----
ISTD 402.70>84.05 (-) 0.00e0



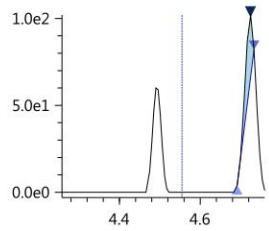
PFHxS-18O
Conc ----
RT ---- Area ----
Q 402.70>84.05 (-) 0.00e0



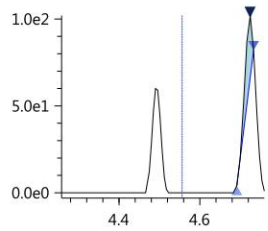
PFHxS_1
Conc ----
RT ---- Area ----
Q 399.00>80.00 (-) 0.00e0



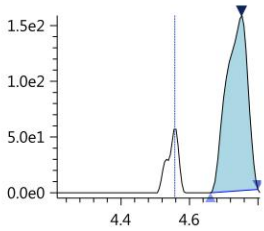
6_2-FTS-13C
Conc 1.1917
RT 4.724 Area 44
Q 428.90>409.00 (-) 1.02e2



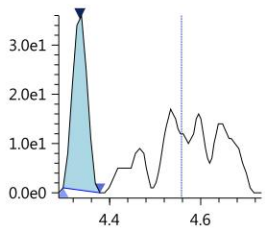
6_2-FTS-13C_IS
Conc 5.0000
RT 4.724 Area 44
ISTD 428.90>409.00 (-) 1.02e2



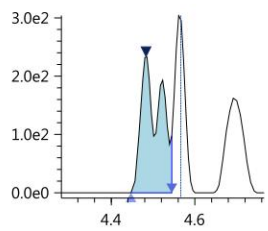
6_2-FTS_1
Conc 75.4922
RT 4.752 Area 683
Q 427.00>407.00 (-) 1.59e2



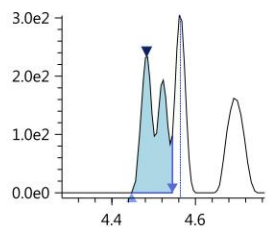
PFHpS_1
Conc 0.0000
RT 4.335 Area 82
Q 449.00>80.15 (-) 3.60e1



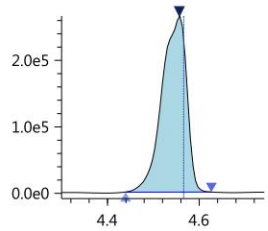
PFOA-13C_IS
Conc 5.0000
RT 4.483 Area 764
ISTD 416.80>372.05 (-) 3.04e2



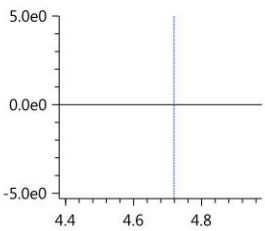
PFOA-13C
Conc 2.3356
RT 4.483 Area 764
Q 416.80>372.05 (-) 3.04e2



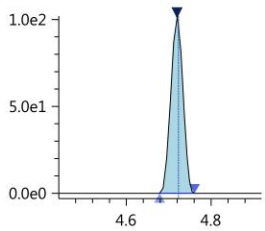
PFOA
Conc 7118.6712
RT 4.557 Area 1001081
Q 413.00>369.00 (-) 2.67e5



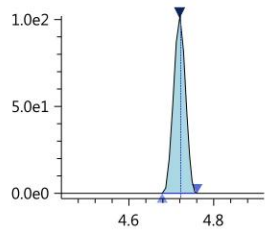
PFOS_1
Conc ----
RT ---- Area ----
Q 499.00>80.00 (-) 0.00e0



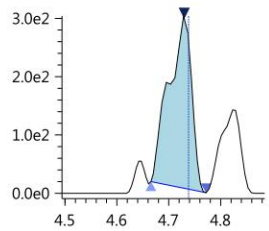
PFOS-13C_IS
Conc 5.0000
RT 4.719 Area 203
ISTD 502.80>80.05 (-) 1.02e2



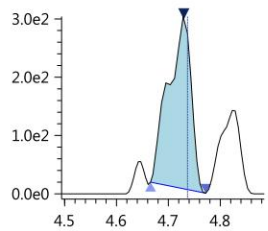
PFOS-13C
Conc 5.3100
RT 4.719 Area 203
Q 502.80>80.05 (-) 1.02e2



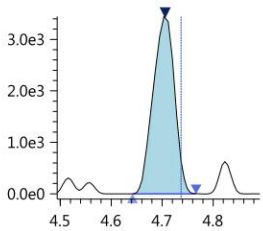
PFNA-13C_IS
Conc 5.0000
RT 4.730 Area 900
ISTD 467.80>423.00 (-) 3.04e2



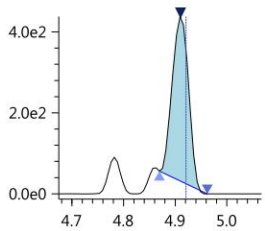
PFNA-13C
Conc 2.4548
RT 4.730 Area 900
Q 467.80>423.00 (-) 3.04e2



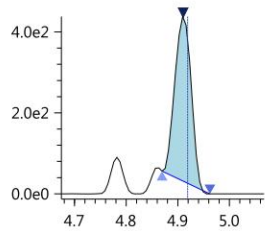
PFNA
Conc 77.3997
RT 4.706 Area 10155
Q 463.00>418.90 (-) 3.44e3



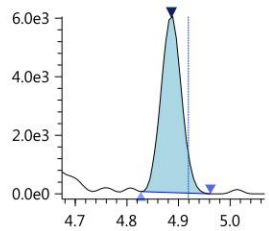
PFDA-13C_IS
Conc 5.0000
RT 4.910 Area 896
ISTD 514.80>469.95 (-) 4.38e2



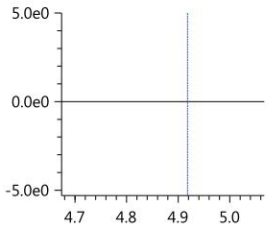
PFDA-13C
Conc 2.5897
RT 4.910 Area 896
Q 514.80>469.95 (-) 4.38e2



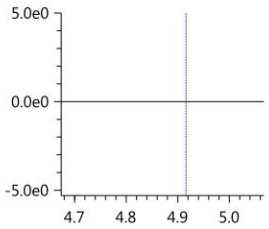
PFDA
Conc 116.2960
RT 4.886 Area 17006
Q 513.00>468.80 (-) 6.06e3



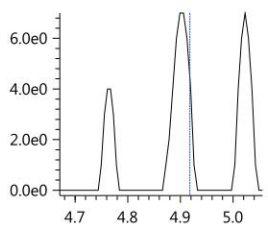
8_2-FTS-13C_IS
Conc ----
RT ---- Area ----
ISTD 528.80>509.00 (-) 0.00e0



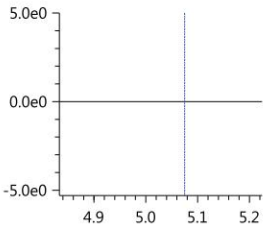
8_2-FTS-13C
Conc ----
RT ---- Area ----
Q 528.80>509.00 (-) 0.00e0



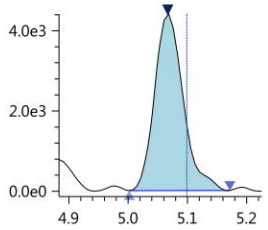
8_2-FTS_1
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-) 7.00e0



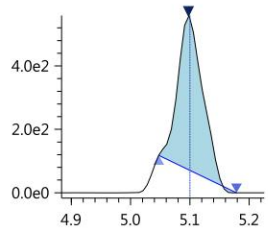
PFDS_1
Conc ----
RT ---- Area ----
Q 599.00>79.90 (-) 0.00e0



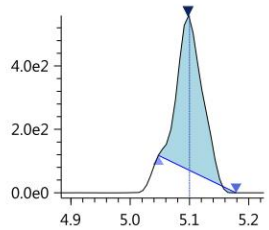
PFUnA
Conc 56.8179
RT 5.067 Area 14812
Q 563.00>518.90 (-) 4.42e3



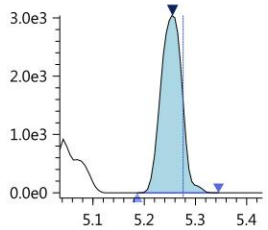
PFUnA-13C_IS
Conc 5.0000
RT 5.098 Area 1400
ISTD 564.80>519.95 (-) 5.59e2



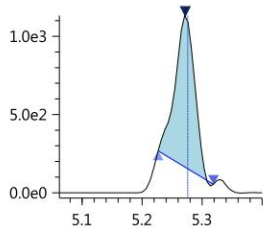
PFUnA-13C
Conc 4.4952
RT 5.098 Area 1400
Q 564.80>519.95 (-) 5.59e2



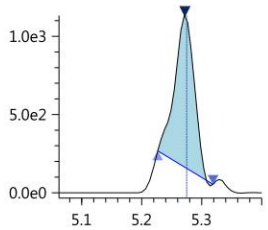
PFDoA
Conc 32.4934
RT 5.255 Area 8902
Q 613.05>569.00 (-) 3.04e3



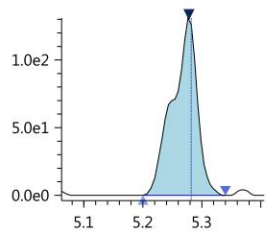
PFDoA-13C
Conc 4.8326
RT 5.272 Area 2192
Q 614.80>569.95 (-) 1.13e3



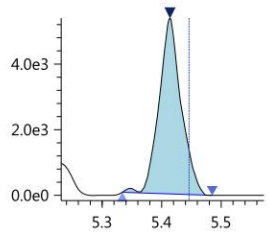
PFDoA-13C_IS
Conc 5.0000
RT 5.272 Area 2192
ISTD 614.80>569.95 (-) 1.13e3



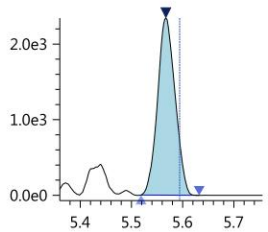
10_2-FtS_1
Conc 0.0000
RT 5.278 Area 384
Q 627.00>606.95 (-) 1.31e2



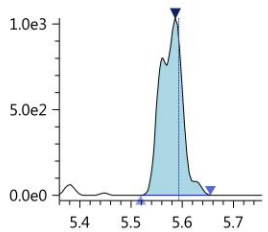
PFTrDA
Conc 23.3075
RT 5.414 Area 13868
Q 663.00>618.90 (-) 5.40e3



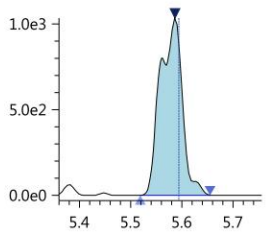
PFTeDA
Conc 15.6119
RT 5.567 Area 5601
Q 713.40>669.00 (-) 2.34e3



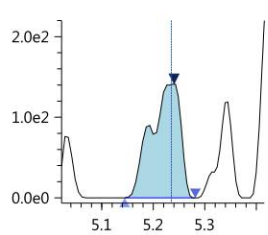
PFTeDA-13C
Conc 9.2915
RT 5.586 Area 3120
Q 714.70>669.90 (-) 1.04e3



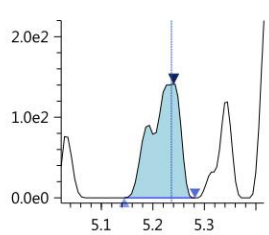
PFTeDA-13C_IS
Conc 5.0000
RT 5.586 Area 3120
ISTD 714.70>669.90 (-) 1.04e3



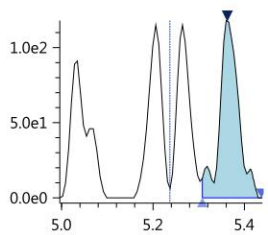
FOSA-13C_IS
Conc 5.0000
RT 5.240 Area 572
ISTD 506.00>78.05 (-) 2.20e2



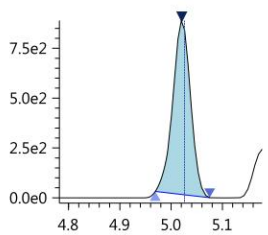
FOSA-13C
Conc 4.9145
RT 5.240 Area 572
Q 506.00>78.05 (-) 2.20e2



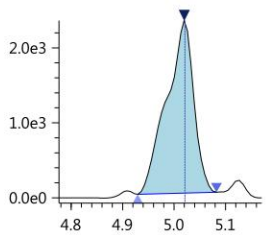
FOSA
Conc 2.2495
RT 5.363 Area 339
Q 498.20>78.00 (-) 1.18e2



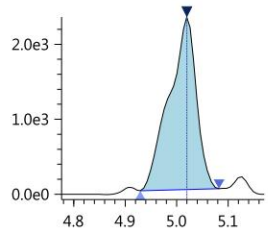
N-MeFOSAA
Conc 2.0469
RT 5.021 Area 2120
Q 570.20>419.00 (-) 8.89e2



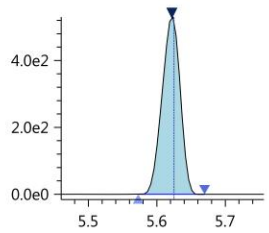
N-MeFOSAA-d3
Conc 99.7200
RT 5.020 Area 8476
Q 572.80>419.05 (-) 2.36e3



N-MeFOSAA-d3_IS
Conc 5.0000
RT 5.020 Area 8476
ISTD 572.80>419.05 (-) 2.36e3



N-MeFOSA-d3_IS
Conc 5.0000
RT 5.622 Area 988
ISTD 514.90>168.90 (-) 5.30e2



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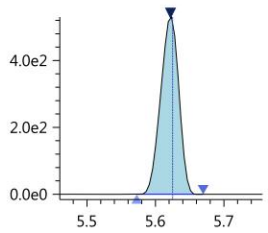
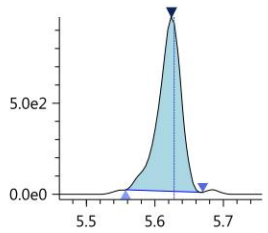
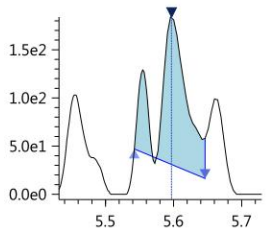
Conc 23.3289
RT 5.622 Area 988
Q 514.90>168.90 (-) 5.30e2



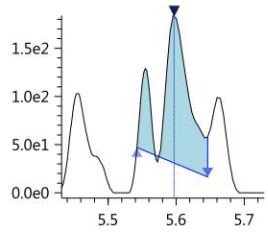
N-MeFOSA
Conc 9.4528
RT 5.624 Area 2212
Q 512.00>169.10 (-) 9.73e2



N-MeFOSE-d7
Conc 9.6581
RT 5.597 Area 432
Q 622.70>59.10 (-) 1.84e2



N-MeFOSE-d7_IS
Conc 5.0000
RT 5.597 Area 432
ISTD 622.70>59.10 (-) 1.84e2



N-MeFOSE
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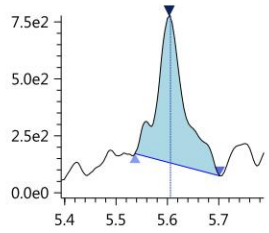
Q 616.00>59.00 (-) 7.78e2



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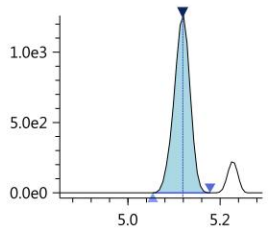

N-EtFOSAA-d5_IS
Conc 5.0000
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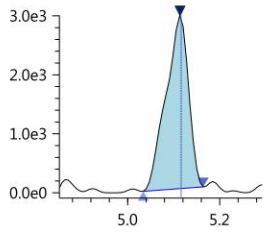
ISTD 588.80>419.00 (-) 3.01e3



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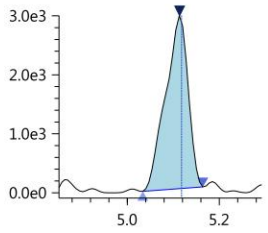
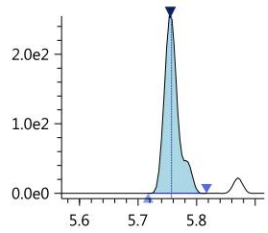
Q 588.80>419.00 (-) 3.01e3



N-EtFOSA-d9_IS
Conc 5.0000
RT 5.755 Area 431
ISTD 530.90>169.15 (-) 2.55e2



N-EtFOSA-d9
Conc 7.3507
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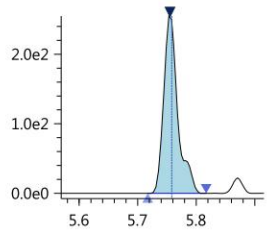
Q 530.90>169.15 (-) 2.55e2



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Conc 30.6194
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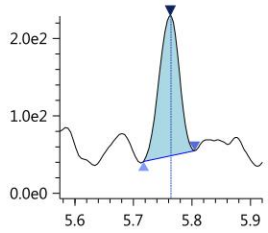

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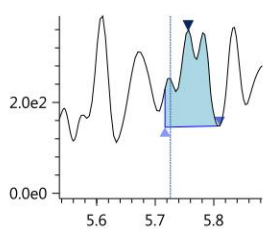

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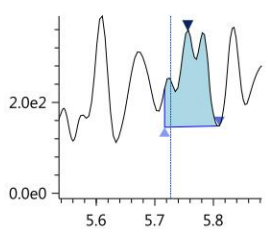

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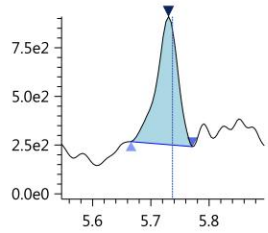

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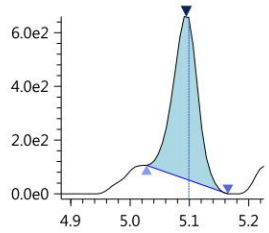

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RT 4.341 Area 181
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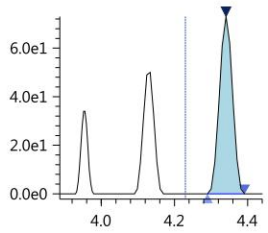

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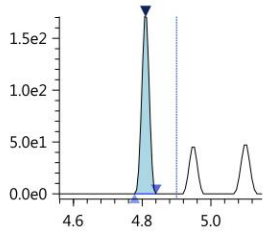
RT 4.810 Area 266
Q 549.00>99.00 (-) 1.71e2



190325_b6

ICAL Date: 3/1/2019
Cal. Std. xp: 6/4/2019
ICAL ID: KC1900086
LIMS ID: 629106

1st Review: LDomreis
2nd Review: MAR 2 8 2019
Column: Phenomenex EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 19-OLC-02-10F **B:** 5mM Ammonium Acetate In MeOH 19-OLC-02-10G

ALS Environmental
LCMS06 -Shimadzu 8050

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-15J	190325_012	PFAS_121918_CM.lcm	1x	☒	high PFHxS surrogate, native ok
2	IB	19-OLC-01-15I	190325_013	PFAS_121918_CM.lcm	1x	☒	
3	K1902064-007	10X	190325_014	PFAS_121918_CM.lcm	10x	☒	report PFPeA, PFHxA, PFHpA only
4	K1902064-010	10X	190325_015	PFAS_121918_CM.lcm	10x	☒	report PFHxS only
5	K1901827-001	10X	190325_016	PFAS_121918_CM.lcm	10x	☒	report PFOS only
6	K1901827-003	10X	190325_017	PFAS_121918_CM.lcm	10x	☒	report PFOS, PFHxS, 6:2 FTS only
7	K1901827-006	10X	190325_018	PFAS_121918_CM.lcm	10x		NR, dilution not needed

Analysis: PFC	IS/Lot/Exp.: 19-0LC-01-05M			Filter lot: NA		Solvent/Lot: DV408	
Sample ID	IS Amount	Sample Aliquot	Final Volume	Dilution Factor	Date Prepared	Analyst	Analyte for dilution
K1901827-001	10 uL	100 uL	1 mL	10x	3/21/2019	CM	PFOS
K1901827-003	10 uL	100 uL	1 mL	10x	3/21/2019	CM	PFOS HxS 6:2
~~K1901827-006~~	~~10 uL~~	~~100 uL~~	~~1 mL~~	~~10x~~	~~3/21/2019~~	~~CM~~	~~PFOS HxS~~
K1902064-007	10 uL	100 uL	1 mL	10x	3/21/2019	CM	PFPeA, PFHxA, PFHpA
K1902064-010	10 uL	100 uL	1 mL	10x	3/21/2019	CM	PFHxS

cm

2064- water deep

1827- Sylvania5

190319_b1

ICAL Date: 3/1/2019
Cal. Std. xp: 6/4/2019
ICAL ID: KC1900086
LIMS ID: 629021

1st Review: CMuller
2nd Review:
MAR 2 1 2019
ALS Environmental
LCMS06 -Shimadzu 8050
Column: Phenomenex EVO-C18 100X4.6 mm S/N: H18-003108
Mobile Phases **A:** 5mM Ammonium Acetate in H2O H2O 19-OLC-01-16K **B:** 5mM Ammonium Acetate In MeOH 19-OLC-01-16I

	Sample Name		File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-01-15J	190319_013	PFAS_121918_CM.lcm	1x	☒	Low MeFOSAA surr, native ok
2	IB	19-OLC-01-15I	190319_014	PFAS_121918_CM.lcm	1x	☒	High PFBS surr, ND
3	KQ1903443-04	MB	190319_015	PFAS_121918_CM.lcm	1x	☒	
4	KQ1903443-03	LCS	190319_016	PFAS_121918_CM.lcm	1x	☒	
5	K1902064-001		190319_017	PFAS_121918_CM.lcm	1x	☒	
6	K1902064-002		190319_018	PFAS_121918_CM.lcm	1x	☒	
7	K1902064-003		190319_019	PFAS_121918_CM.lcm	1x	☒	
8	K1902064-004		190319_020	PFAS_121918_CM.lcm	1x	☒	
9	K1902064-005		190319_021	PFAS_121918_CM.lcm	1x	☒	
10	K1902064-006		190319_022	PFAS_121918_CM.lcm	1x	☒	
11	K1902064-007		190319_023	PFAS_121918_CM.lcm	1x	☒	See dilution for PFPeA, PFHxA, PFHpA.
12	K1902064-008		190319_024	PFAS_121918_CM.lcm	1x	☒	
13	K1902064-009		190319_025	PFAS_121918_CM.lcm	1x	☒	
14	K1902064-010		190319_026	PFAS_121918_CM.lcm	1x	☒	See dilution for PFHxS
15	KQ1903443-01	K1902064-010	190319_027	PFAS_121918_CM.lcm	1x	☒	
16	KQ1903443-02	K1902064-010	190319_028	PFAS_121918_CM.lcm	1x	☒	
17	K1902064-011		190319_029	PFAS_121918_CM.lcm	1x	☒	
18	K1902298-001		190319_030	PFAS_121918_CM.lcm	1x	☒	
19	K1902298-002		190319_031	PFAS_121918_CM.lcm	1x	☒	
20	K1902298-003		190319_032	PFAS_121918_CM.lcm	1x	☒	
21	K1902298-004		190319_033	PFAS_121918_CM.lcm	1x	☒	
22	K1902298-005		190319_034	PFAS_121918_CM.lcm	1x	☒	
23	K1902298-006		190319_035	PFAS_121918_CM.lcm	1x	☒	
24	K1902298-007		190319_036	PFAS_121918_CM.lcm	1x	☒	
25	K1902298-008		190319_037	PFAS_121918_CM.lcm	1x	☒	

APPENDI F

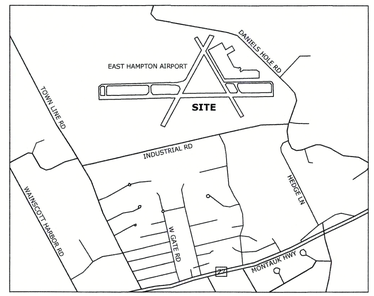
C T a e e S r e Dra in

XREFS: NONE

PROJECT NUMBER: 18.8270

MONITOR WELL CHART							
May 8, 2018							
MONITOR WELL	GRADE ELEVATION	TOP OF CASING	TOP OF PVC	NORTHING	EASTING	LATITUDE	LONGITUDE
EH-A	33.01	33.01	32.76	293881.2540'	1467766.3140'	N40°57'36.161"	W72°14'57.395"
EH-B	42.17	42.17	41.92	295334.5240'	1466906.4100'	N40°57'50.687"	W72°15'08.223"
EH-C	41.31	41.31	41.09	294396.9350'	1468807.9100'	N40°57'41.050"	W72°14'43.687"
EH-E	41.99	41.99	41.72	295366.1840'	1466765.1270'	N40°57'51.028"	W72°15'10.056"
EH-P1	54.95	54.95	54.78	293717.8470'	1464739.4660'	N40°57'35.143"	W72°15'36.882"
EH-P2	48.90	48.90	48.72	293890.2460'	1466108.8660'	N40°57'36.577"	W72°15'18.992"
EH-P3	34.54	34.54	34.28	293820.1500'	1469391.1940'	N40°57'35.236"	W72°14'36.237"
EH-1 OLD	42.95	42.95	42.69	292195.7600'	1467395.9460'	N40°57'19.584"	W72°15'02.660"
EH-10	46.43	46.43	46.14	292000.5930'	1466655.3150'	N40°57'17.802"	W72°15'12.362"
EH-16	37.38	37.38	37.21	294332.5670'	1468244.9050'	N40°57'40.525"	W72°14'51.041"
EH-18	53.62	53.62	53.33	292374.4490'	1465270.8930'	N40°57'21.767"	W72°15'30.305"
EH-19A OLD	47.38	47.38	47.12	292388.5660'	1466467.2950'	N40°57'21.672"	W72°15'14.711"
EH-19B OLD	46.97	46.97	46.63	292315.2020'	1466576.3710'	N40°57'20.925"	W72°15'13.309"
MW-10	19.52	19.52	19.29	292337.4150'	1469430.1760'	N40°57'20.581"	W72°14'36.116"
SB-1	33.65			293933.6210'	1467745.2710'	N40°57'36.683"	W72°14'57.656"
SB-2	34.21			293935.7400'	1467820.8260'	N40°57'36.689"	W72°14'56.671"
SB-3	32.22			293880.5700'	1467844.3050'	N40°57'36.139"	W72°14'56.379"
March 4, 2019							
EH-1 NEW	43.02	43.02	42.76	292196.6572'	1467395.4680'	N040° 57' 19.59"	W072° 15' 02.67"
EH-19A NEW	47.29	47.38	47.14	292388.7281'	1466464.5510'	N040° 57' 21.67"	W072° 15' 14.75"
EH-19A2 NEW	48.40	48.51	48.28	292301.0515'	1466489.6030'	N040° 57' 20.80"	W072° 15' 14.44"
EH-19B NEW	46.91	46.95	46.78	292314.5821'	1466576.9210'	N040° 57' 20.92"	W072° 15' 13.30"
EH-B1 NEW	42.05	42.08	41.95	295252.1032'	1466979.5870'	N040° 57' 49.86"	W072° 15' 07.29"
EH-162 NEW	36.68	36.83	36.57	294154.6689'	1468245.0130'	N040° 57' 38.77"	W072° 14' 51.09"
ELEVATIONS SHOWN ARE NGVD29 DATUM							





LEGEND:

EH-A ◑ MONITORING WELL LOCATION

SB-1 SOIL BORING LOCATION

BAR SCALE
200 0 100 200 400
1 inch = 200 ft.

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

WILLIAM J. NETTLETON
P.L.S. NO. 49513

STATE OF NEW YORK · WILLIAM J. NETTLETON · 049513 · LICENSED LAND SURVEYOR

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
3/4/19	1	NEW MONITOR WELLS ADDED	MDD	MPN	WJN
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.

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APPROVED: WJN
DRAFTED : SMW
CHECKED : JM
PROJ. NO : 18.8270
SCALE : 1"=200'
DATE : MAY 8, 2018

MONITORING WELL LOCATONS
EAST HAMPTON AIRPORT
200 DANIELS HOLE ROAD

WAINSCOTT, TOWN OF EAST HAMPTON — SUFFOLK COUNTY, NEW YORK

C.T. MALE ASSOCIATES
Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.
50 CENTURY HILL DRIVE, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299

SHEET 1 OF 1
DWG. NO: 18-276

CAD DWG. FILE NAME: K:\Projects\188270\Survey\Drawings-Maps\mw-east hampton airport.dwg

CAD DWG. FILE NAME: mw-east hampton airport.dw

APPENDI

In esti ation Deri e aste Dis osa Doc entation

ENVIRONMENTAL PRODUCTS & SERVICES OF VERMONT, INC.

24-Hour Emergency Phone Number
1-800-843-8265

Please print or type

BILL OF LADING

Generator EPA ID #: N/A

1. Document No.: MET3935
2. Page 1 of 1

3. Generator's Name and Mailing Address
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONS
625 BROADWAY
ALBANY, NY 12233
4. Generator's Phone (518-951-2373

Site Address
NEW YORK STATE DEPARTMENT OF ENVIR
200 DANIELS HOLE ROAD
WAINSCOTT, NY 11975 (NY)

5. Transporter 1 Company Name: ENVIRONMENTAL PROD & SVCS OF VT, INC.
6. EPA ID #: NYR000115733

A. State Transporter's ID: 47211 PC
B. Transporter 1 Phone: 315-451-6666

7. Transporter 2 Company Name:
8. EPA ID #:

C. State Transporter's ID:
D. Transporter 2 Phone:

9. Designated Facility Name and Site Address
WASTE RECOVERY SOLUTIONS
343 KING STREET
MYERSTOWN, PA 17067
HM

10. EPA ID #: PAR000043026

E. State Facility's ID:
F. Facility's Phone: 717-866-9855

	11. Shipping Name	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	NON RCRA, NON DOT, SOLIDS, N.O.S. (INVESTIGATIVE DERIVED SOIL CUTTINGS)		19 DM		
b.	NON-RCRA, NON-DOT, LIQUIDS, n.o.s.(INVESTIGATIVE DERIVED DEVELOPMENT WATER)		3 DM		G
c.					
d.					

GENERATOR

G. Additional Descriptions for Materials Listed Above
Document # D1234 Job #: W7741 PO #: W7741
1) LFI-162501 ~~17~~ 19 X 55 GAL. 2) LFI-162502 ~~6~~ 3 X 55 GAL.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation. The materials described on this document are not subject to federal uniform hazardous waste manifest requirements.

Printed/Typed Name	Signature	Date (Month / Day / Year)
Greg Dunlavey - Employed by RECOL on behalf of NYSDEC		3 / 6 / 19

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)
Chris Abbey		3 / 6 / 19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month / Day / Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the materials covered by this bill of lading except as noted in item 19.

Printed/Typed Name	Signature	Date (Month / Day / Year)

BILL OF LADING

ARO-GRAPH CORP. (315) 463-8693